# THE INLAND PRINTER

AUGUST 1948

*Photo, Edwin Levick, Inc.*

# *Quality Wins Again!*

It's the same breeze for all sailboats, yet one comes across the finish line before the others. All brands of coated blanks have to meet exactly the same pressroom conditions, but FALPACO Quality invariably finishes far out in front. The reason is the special coatings of Falpaco Blanks—a special coating for letterpress —a special coating for offset lithography—which assure excellent reproduction.

*Distributed by Authorized Paper Merchants from Coast to Coast*

FALPACO

**FALULAH PAPER COMPANY**

*New York Office—500 Fifth Avenue, New York 18 • Mills: Fitchburg, Mass.*

# Set Superior-Figure Combinations on the Ludlow

*Superior-figure matrices aligned at the top are assembled directly in the line of Ludlow matrices, from which is cast a single one-piece slug*

With the use of superior-figure matrices on the Ludlow, the composing room of the commercial printer or the newspaper is equipped to produce price-figure combinations as easily and rapidly as ordinary display.

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Superior-figure matrices also are provided for italic and script typefaces, making these price combinations as easy to assemble as any roman letter.

This simple method of handling superior figures rapidly and efficiently is typical of many other economies afforded by the use of Ludlow as an essential part of composing room production.

**A FEW LUDLOW SUPERIOR FIGURE COMBINATIONS**

Superior-figure matrices, with or without underscore, are available for any Ludlow typeface in sets of 26 matrices, consisting of two each for the figures, dollar sign, period and lower-case "c," or as sorts.

•

$19.45 to $48.65
24 Point Franklin Gothic Extra Condensed

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30 Point Tempo Heavy

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42 Point Karnak Black Italic

$12.98
48 Point Tempo Bold [illustrated in stick]

$6.20
60 Point Bodoni Black

$8.45
72 Point Radiant Heavy

**Ludlow Typograph Company** • 2032 Clybourn Avenue, Chicago 14

Published monthly by Maclean-Hunter Publishing Corporation, 309 West Jackson Boulevard, Chicago 6, Illinois. Subscription, $4.00 a year in advance; single copies 40 cents. (Send Canadian funds—$4.50 a year; single copies, 45 cents—to The Inland Printer, Terminal A. P. O. Box 100, Toronto.) Foreign $10.00 a year; three years, $20.00. Entered as second-class matter, June 25, 1885, at the Post Office at Chicago, Illinois, under Act of March 3, 1879. Additional second-class entry at Lafayette, Indiana, under date of April 30, 1948, Copyrighted 1948 Maclean-Hunter Publishing Corporation.

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**WESTON'S BLACKSTONE BOND**
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25% Cotton Fibre Content

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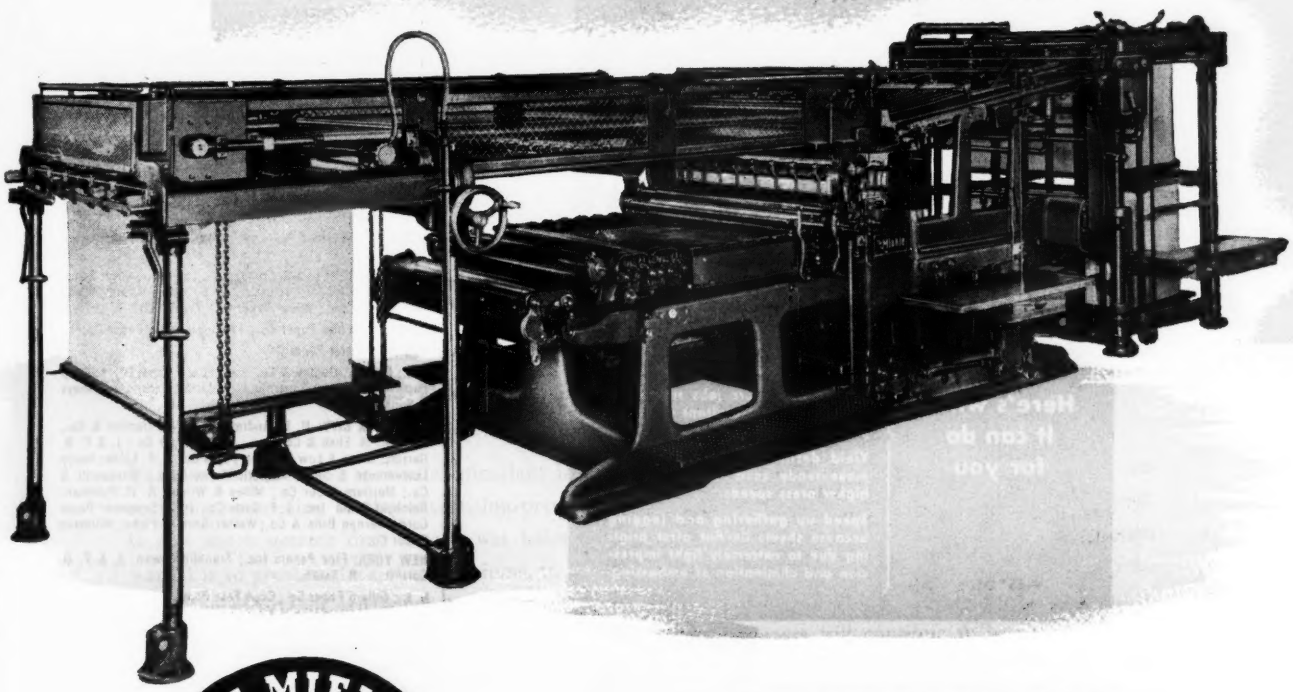

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**MIEHLE PRINTING PRESS & MFG. CO.**

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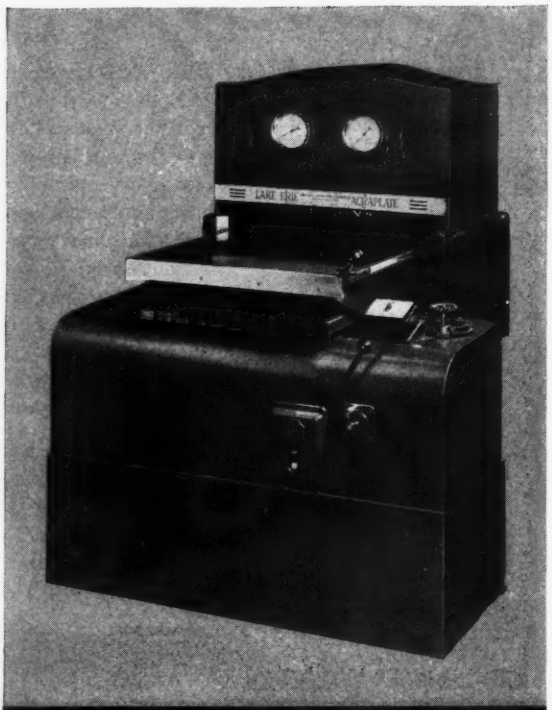

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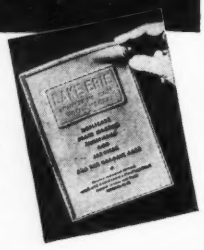

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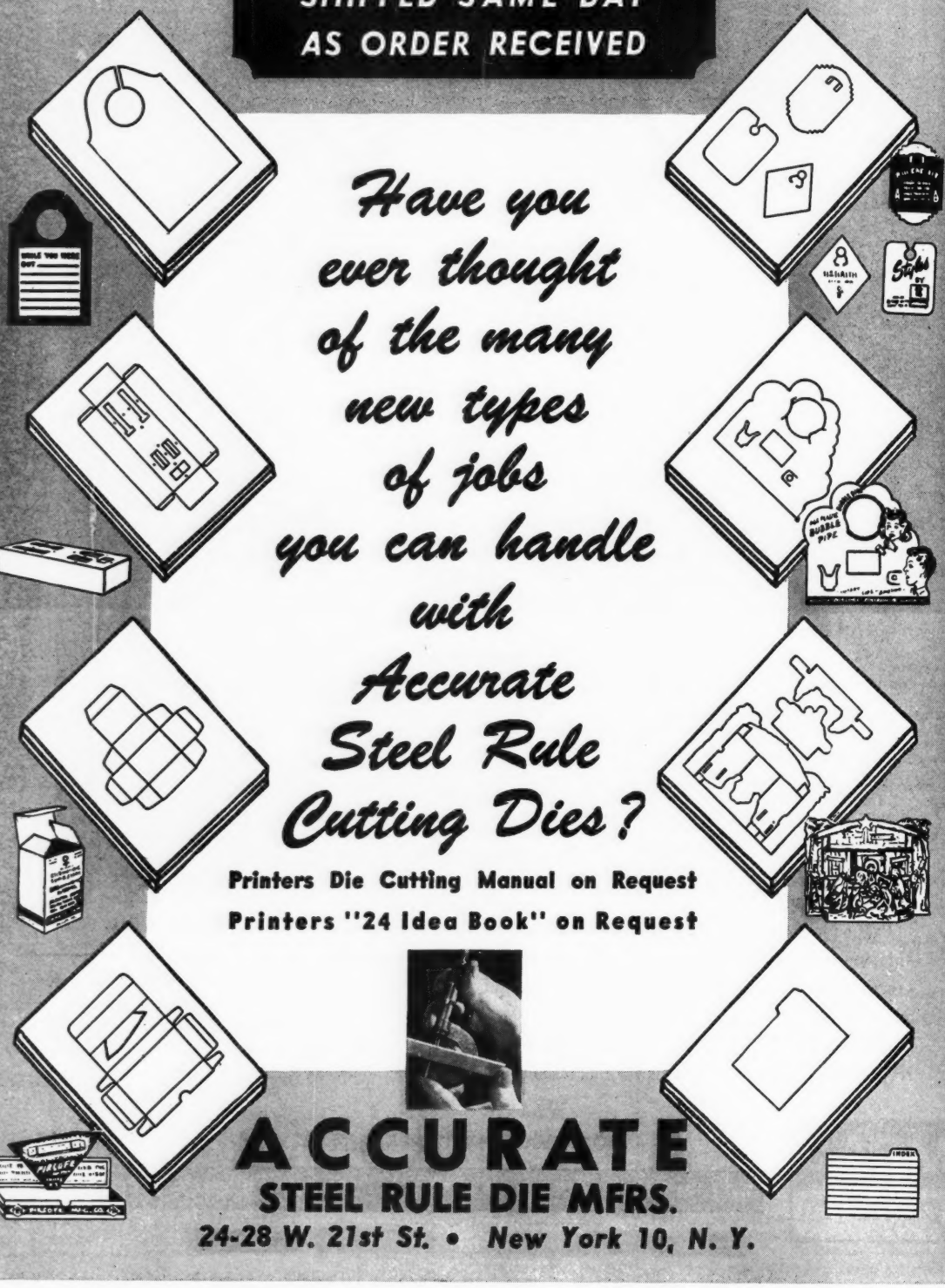

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*Write for Folder*

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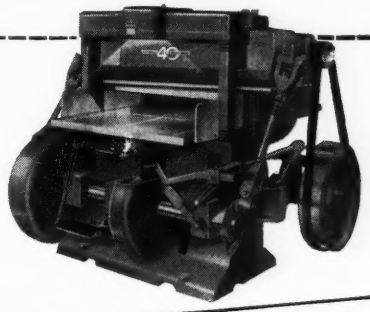

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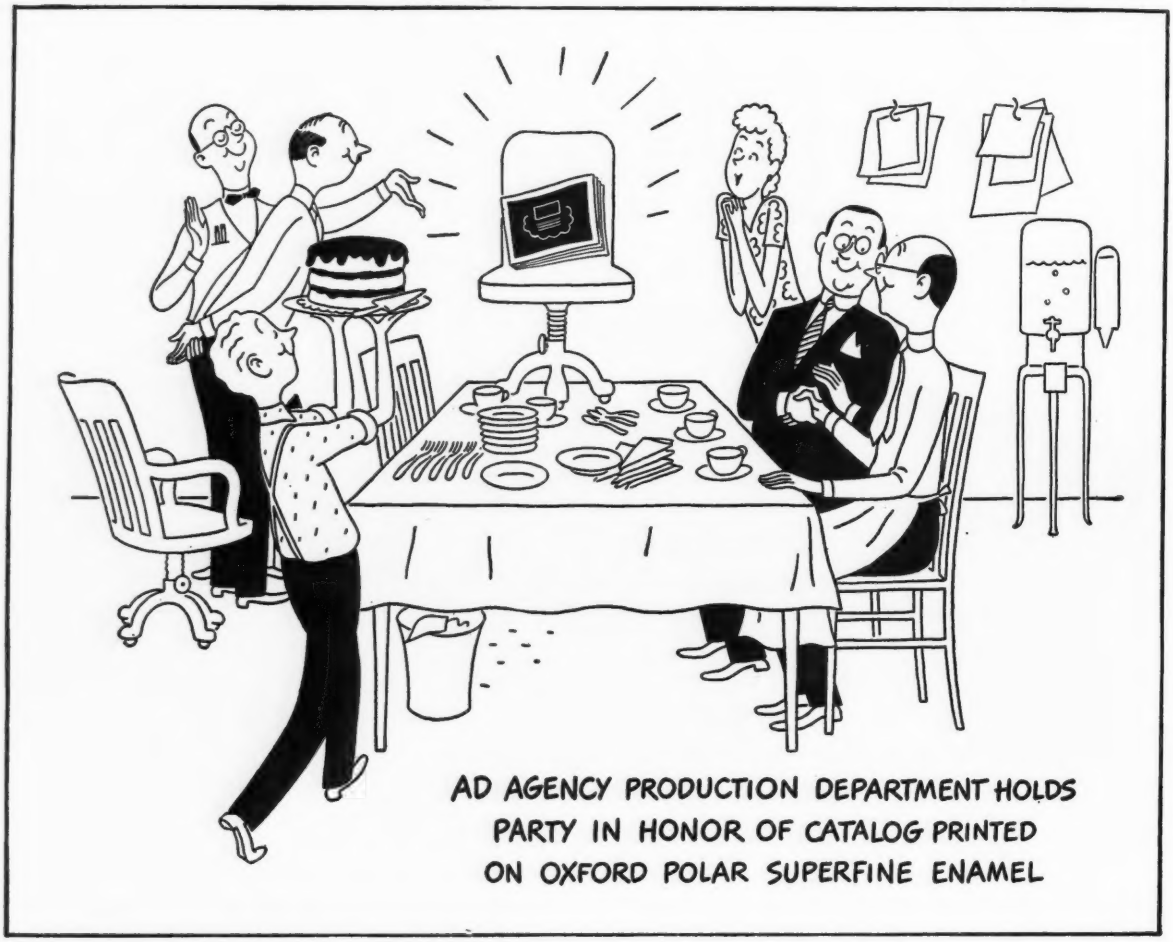


PIECES printed by letterpress on Oxford Polar Superfine Enamel almost make you feel like throwing a party in their honor. And there are plenty of places where Polar is *the* paper to specify.

Polar is superfine for direct mailings, catalogs, house organs and school and college annuals. It's ideal for photographic art books, company reports and scientific texts, too—anywhere you want to reproduce fine illustrative detail by the letterpress process.

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*Included in Oxford's line of quality printing and label papers are:* Polar Superfine Enamel, Maineflex Enamel Offset, Maineflex C1S Litho, Mainefold Enamel, White Seal Enamel, Engravatone Coated, Carfax English Finish, Super and Antique, Aquaset Offset and Duplex Label.

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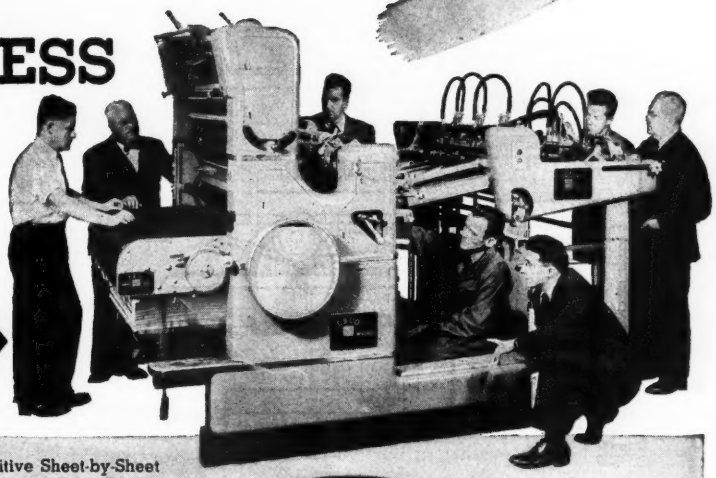

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- Variable Accurate Ink Fountain Easily Cleaned
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- Reduced Maintenance — Standard Replacement Parts
- Simplified Operating Press Controls
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an exclusive feature of the
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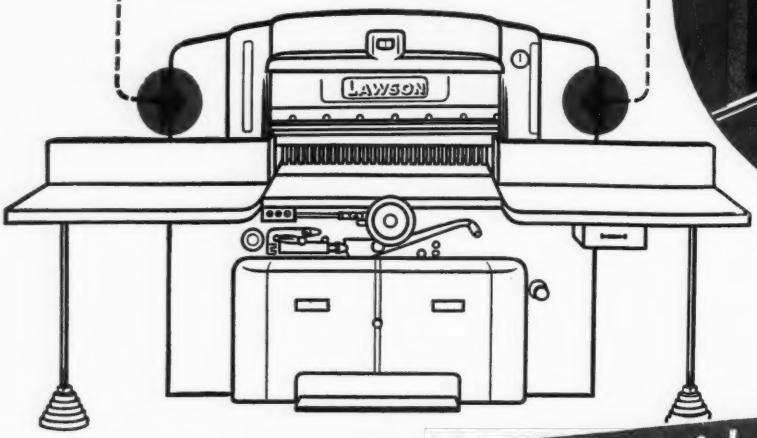
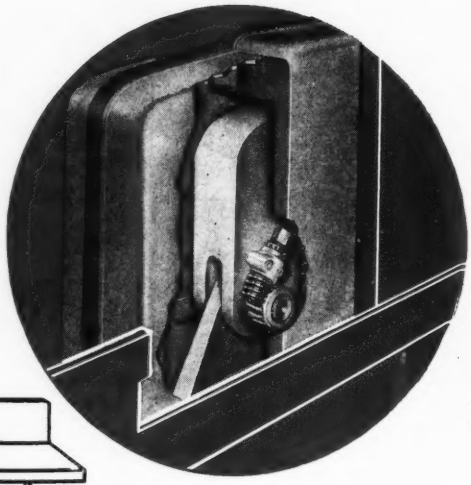
**LAWSON HYDRAULIC CLAMP CUTTERS**



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MAIN OFFICE AND SHOWROOM: 426 WEST 33rd STREET, NEW YORK 1, N.Y.

PIONEERS IN PAPER CUTTING MACHINERY SINCE 1898

good investment in

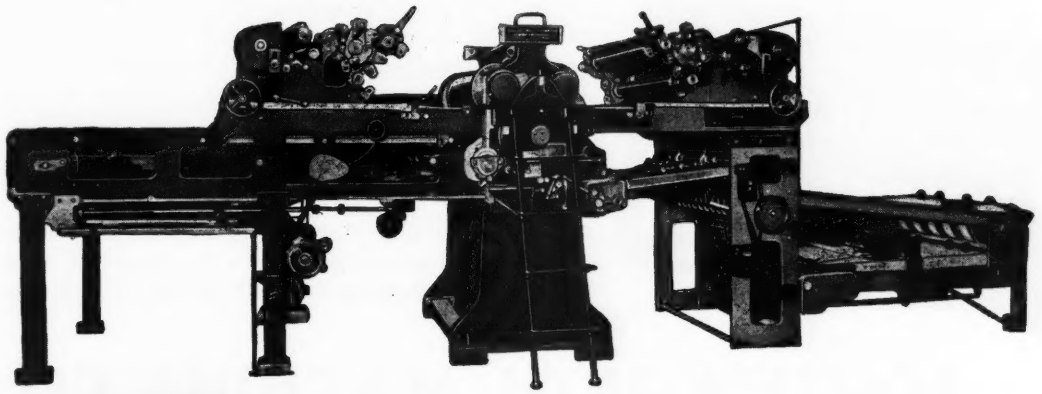
# COLOR

# PRINTING

## THE COTTRELL TWO-COLOR SHEET-FED ROTARY

Here is a press designed and engineered to achieve dependable, and often record breaking production of flawless color printing. These outstanding two-color presses will print at speeds of up to 4500 sheets per hour or 5500 sheets per hour depending upon the size of press used.

In every aspect from quality to volume delivered, the Cottrell two-color rotary should be considered in the printer's plans.



Cottrell

C. B. COTTRELL & SONS CO.

*Westerly, Rhode Island*

New York: 25 E. 26th St. • Clayburn Division: 3713 N. Humboldt Ave., Milwaukee, Wis.
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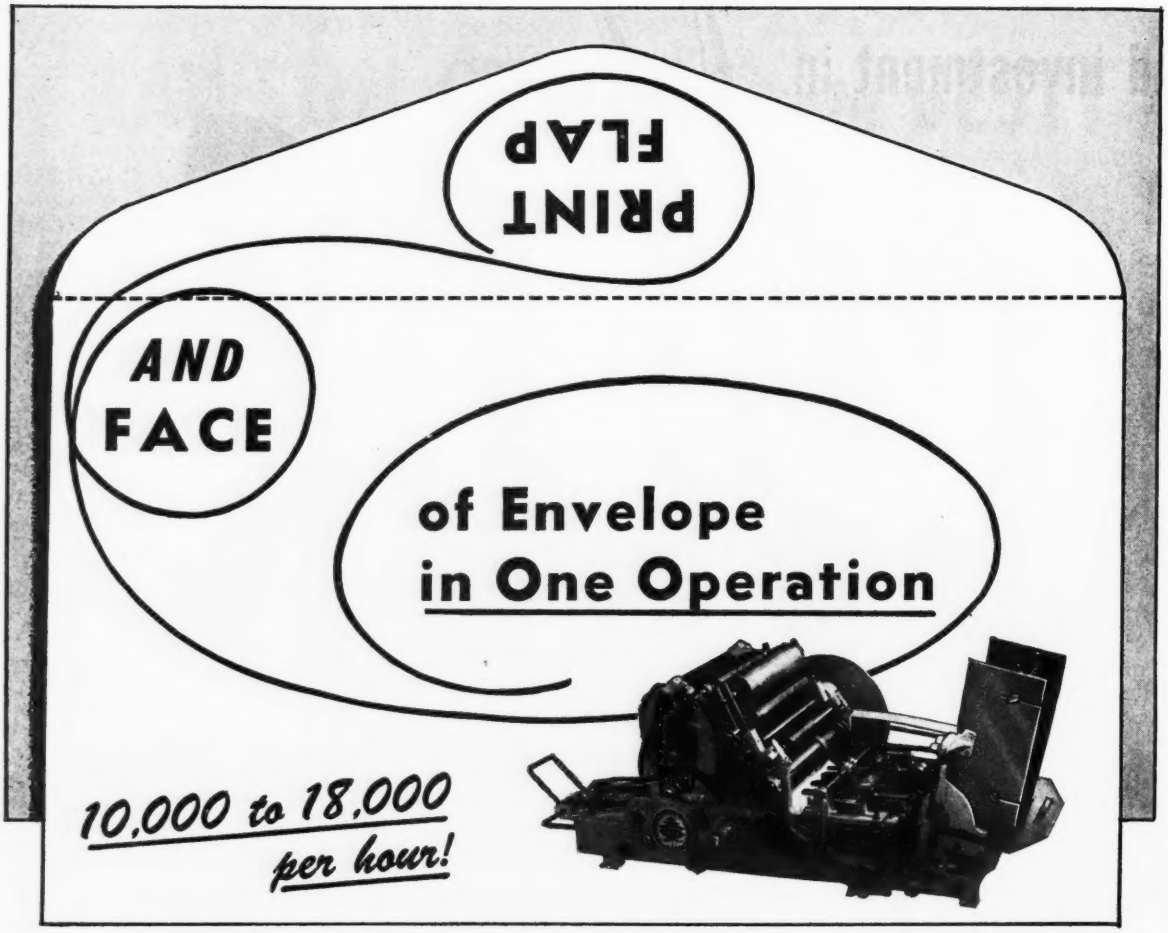



# With a SOUTHWORTH-POST LIGHTNING SPEED ENVELOPE PRESS

**Makes It Possible for YOU to give Speedier Service at Greater PROFIT**

The accurate, automatic action of the Southworth-Post Envelope Press enables the operator to produce more work in less time than ever before, printing BOTH face and flap of envelopes, at from 10,000 to 18,000 an hour.

The press is simplicity itself. Prints from type, Ludlow, linotype slugs, electros, or rubber plates. Forms are changed in a matter of moments. Heat, cold, or static do not affect feeding.

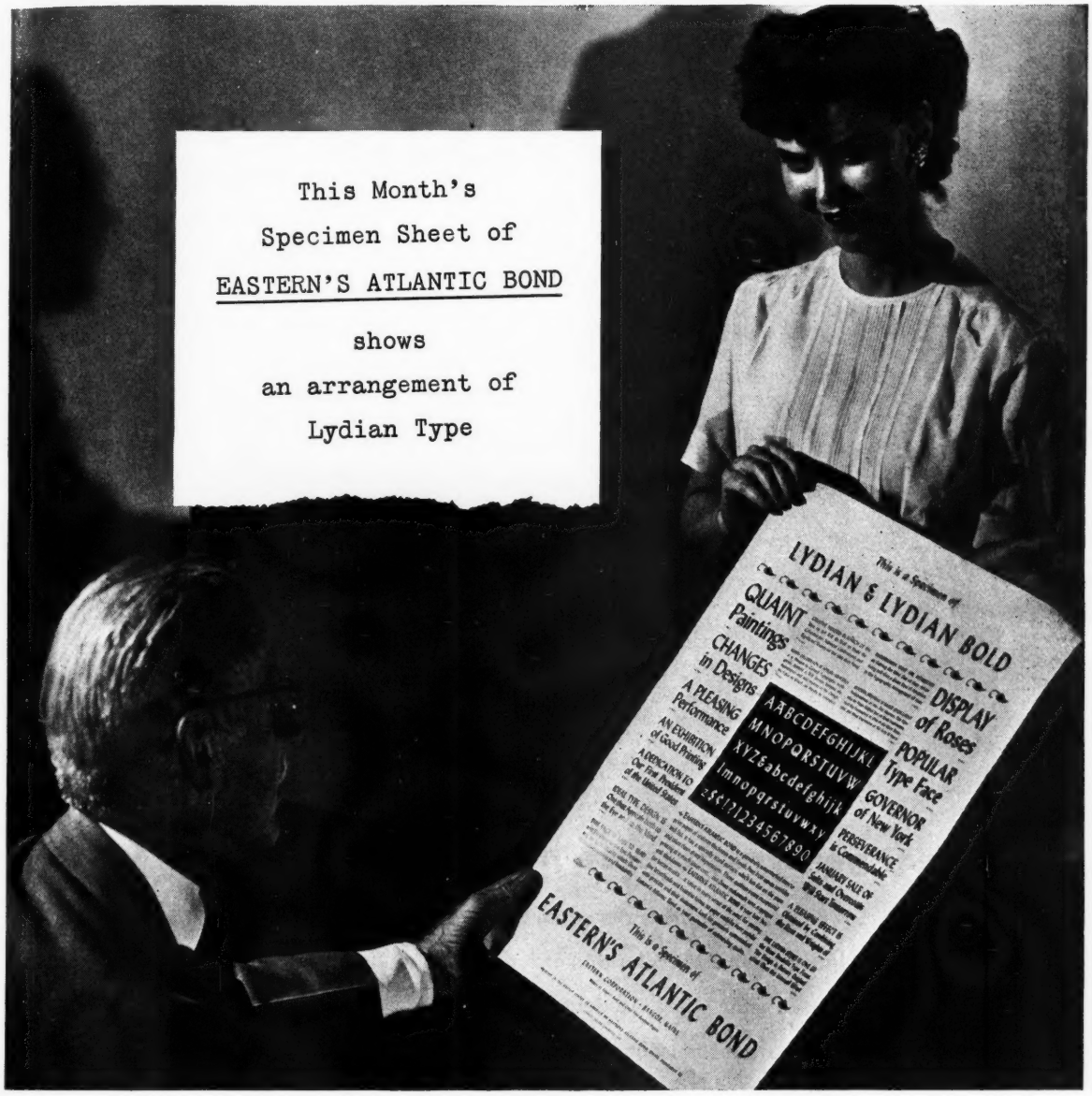
This completely automatic press will put any printshop on the road to quicker and greater profits, at a low investment. Takes up space of only 53 x 27 inches on a table. Write for full particulars.

## SOUTHWORTH MACHINE CO.

**GRAPHIC ARTS DIVISION**

***"Over 50 Years of service to the Graphic Arts"***

**30 Warren Avenue** **Portland, Maine**




DURING the month of August, Eastern Corporation is distributing to printers and buyers of printing a specimen sheet of *Eastern's Atlantic Bond* which shows an arrangement of Lydian and Lydian Bold Type. This sheet was designed and set by John M. Lamoureux of St. Louis, Missouri, one of the outstanding typographers in the Middle West.

Eastern's Atlantic Bond is a genuinely watermarked, easy to print paper of uniform thickness and finish. Free from waves, wrinkles, and lint, it has a specially sized surface which lies flat on the press and takes clean, sharp impressions. For printing fine letterheads and business forms, no paper could be more popular with printers and their customers.

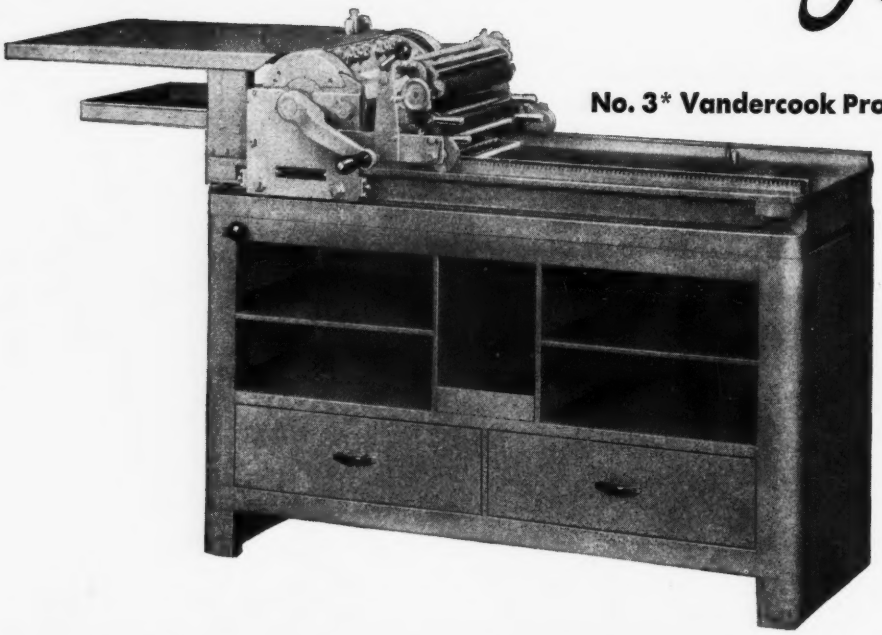
If you, as one who specifies paper or printing, are interested in this specimen sheet of Eastern's Atlantic Bond and would like to receive specimen sheets of Eastern's other fine business papers, a request on your business letterhead will receive prompt attention from our Advertising Department.

**EASTERN CORPORATION**

**BANGOR, MAINE**

*Makers of Atlantic Bond and other Fine Business Papers*

# Quality Proofs... *Fast!*



**No. 3* Vandercook Proof Press**

*Form Size: 14"x18"*

## *Excellent general purpose proof press*

with *automatic* inking for producing proofs of highest quality, including process color and etch proofs. Also ideal for testing plates. • The No. 3 Vandercook inking system is adequate for the heaviest forms. Both form rollers are gear driven; contact with the form is adjustable. Five grippers are automatic, insuring firm hold on large or small sheets. Micrometer front and side guides, with adjustable spring sheet holders to engage the sheet above the printing line, insure positive register. Guarded gears insure utmost in safety.

## *A proof press you'll be proud to own!*

**One of the eight Vandercook Proof Presses sold exclusively by*

## American Type Founders Sales Corporation

*Branches in principal cities*

Copyright, 1948, by The Northwest Paper Company

# NORTHWEST

## Pedigreed Printing Papers

ALWAYS MAKE GOOD PRINTING BETTER

NORTHWEST PEDIGREED PAPERS
50 YEARS OF MAKING BETTER PAPERS
1898 — 1948
ALWAYS MAKE GOOD PRINTING BETTER

THE NORTHWEST PAPER COMPANY . . . . CLOQUET, MINNESOTA

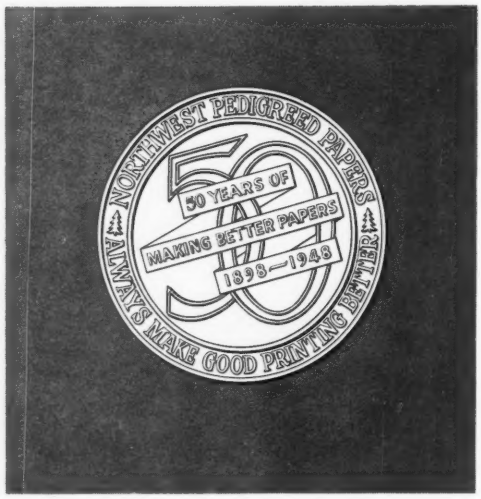
# THE NORTHWEST PAPER COMPANY

CLOQUET, MINNESOTA

CHICAGO 6 - 20 N. WACKER DRIVE
MINNEAPOLIS 2 - FOSHAY TOWER
ST. LOUIS 3 - SHELL BUILDING

## PRINTING PAPERS

NORTHWEST BOND
NORTHWEST LEDGER
NORTHWEST MIMEO BOND
NORTHWEST OFFSET
NORTHWEST INDEX BRISTOL
NORTHWEST POST CARD
KLO-KAY BOOK
KLO-KAY LABEL
MOUNTIE BOOK
MOUNTIE OFFSET
CARLTON BOND
CARLTON LEDGER
CARLTON MIMEOGRAPH
CARLTON DUPLICATOR
NORTH STAR WRITING
POSTER




## CONVERTING PAPERS

PAPETERIES
DRAWING
ADDING MACHINE
REGISTER
LINING
GUMMING
COATING RAW STOCK
CUP PAPER

## ENVELOPE PAPERS

NORTEX WHITE
NORTEX BUFF
NORTEX GRAY
MOUNTIE
CARLTON

5209

# Send for this *Free* Hammermill Portfolio

## See why *Cockletone Bond* "sells itself"!

In the picture above, the new Hammermill *Cockletone Bond* Portfolio (upper left) has been opened to show the inside spread, including the pocket of printed specimens. At the right and bottom these fine examples of the graphic arts have been spread out to suggest the wide variety of uses for which you can confidently recommend this handsome, tub-sized air-dried paper.

You will find this Portfolio a very impressive selling aid when discussing a stationery job.

Examine *Cockletone Bond* yourself. Note the "heavier feel," the crisp crackle and snap that add sparkle and distinction to good design and press work.

It is these qualities, plus the way this paper feeds and takes ink on the press, that have given *Cockletone Bond* such an enthusiastic list of users in just one year.

Send the coupon for the Portfolio. See why *Cockletone Bond* "sells itself."

**And send for this sample book**

*Send this coupon now*

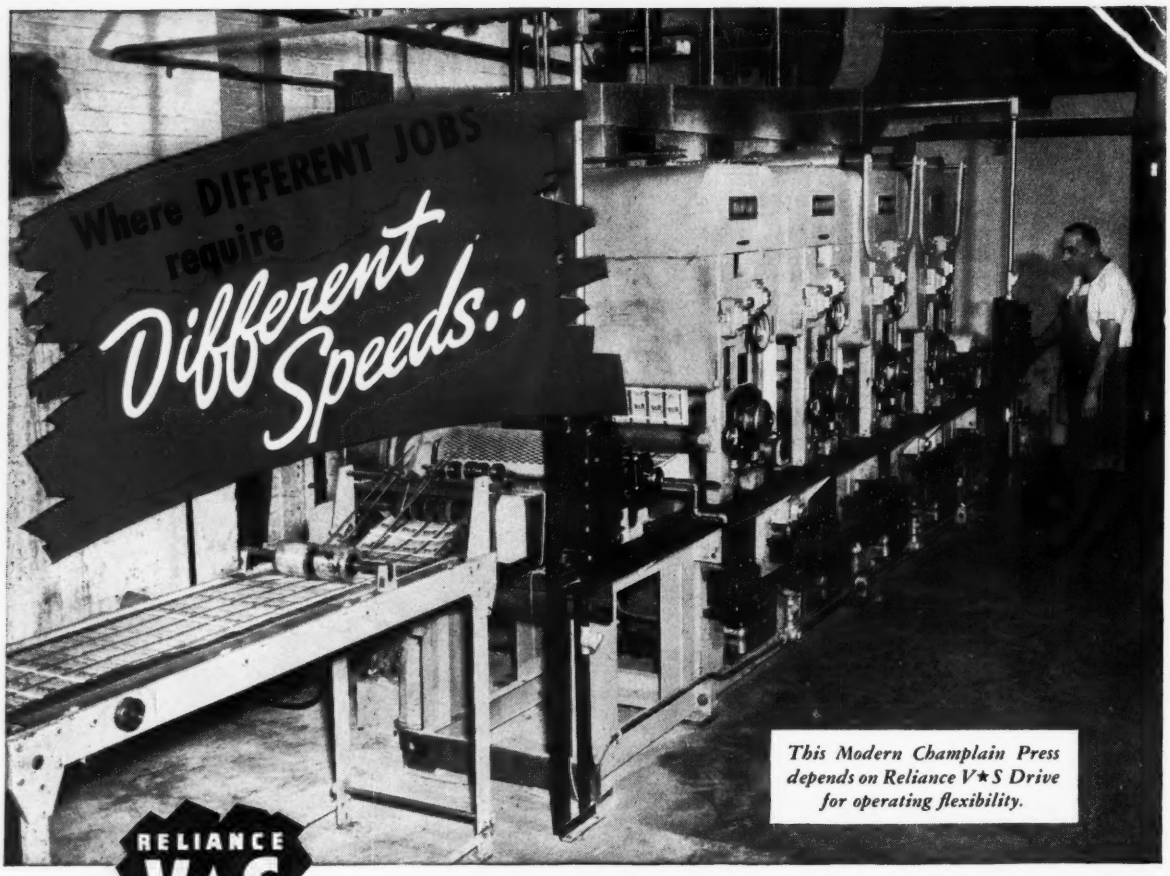
HAMMERMILL *Cockletone Bond*

Hammermill Paper Company, 1601 East Lake Road, Erie, Pennsylvania

Please send me—FREE—the *Cockletone Bond* Portfolio and include a sample book showing *Cockletone Bond* in all weights for letterhead use.

Name_____ Position_____

(Please attach to, or write on, your business letterhead) IP-AU

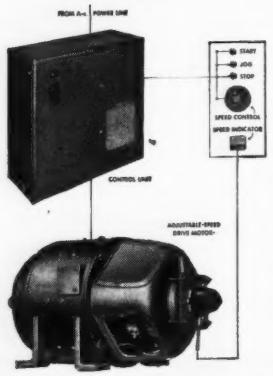



*This Modern Champlain Press depends on Reliance V★S Drive for operating flexibility.*

RELIANCE V★S DRIVE

# RELIANCE V★S DRIVE

## "Adjustable-Speeds from A-c. Circuits"




*Conveniently-packaged, factory-wired V★S Drives are available from 1 to 200 hp. Two or more Motors may be operated simultaneously from a single Control Unit.*

Throughout the graphic arts field, the ability to adjust the speed of equipment to suit the job is often vital to efficient, profitable operation. And because Reliance V★S Drive provides quicker, easier speed changing with smoother acceleration and deceleration . . . it is claiming more and more users. Operating from A-c. circuits, this *Completely-packaged, All-electric, Adjustable-speed Drive* also offers quick, smooth starting and stopping . . . jogging speed for make-ready and inspection . . . maintenance of proper tension. Control can be manual or automatic . . . either at the press or from remote stations. Write today for *new* Bulletin 311, giving further facts it will pay you to have on Reliance V★S, the drive that has been proved in *10 years* of successful applications.

**Sales Representatives in Principal Cities**

**RELIANCE ELECTRIC AND ENGINEERING CO.**

1101 IVANHOE ROAD • CLEVELAND 10, OHIO

*"Motor-Drive for More Than Power"*

*Photograph courtesy Chevrolet Division, General Motors Corporation*

## *Fine Half-Tone Reproductions Require Fine Coated Paper*

"Fresh as a daisy after driving 93 miles" captioned the above photograph in a Chevrolet advertisement. This splendid example of publicity, designed to attract women, was employed to illustrate a recent article in ADVERTISING AGE . . . one of many national publications *using Consolidated Coated* for top-quality printing of illustrations and text.

# Consolidated Coated Papers

PRODUCTION GLOSS
MODERN GLOSS

The comfort, style and convenience of motor cars, furniture or household utensils . . . of unusual interest to women . . . can be vividly portrayed with good photographs.

The smooth, enameled surfaces of Consolidated Coated reproduce all the beauty and details of fine photographs in a striking and realistic manner. Yet this superior enamel is sold *at uncoated paper prices.*

Manufactured in weights down to 45 pounds, Consolidated Coated meets almost any printing need.

CONSOLIDATED WATER POWER & PAPER COMPANY

MAIN OFFICES
WISCONSIN RAPIDS, WISCONSIN

Five Modern Mills

SALES OFFICES
135 SO. LA SALLE ST., CHICAGO 3

YOUR PAPER MERCHANT CAN SUPPLY YOU WITH ENVELOPES MADE BY OLD COLONY

# Old Colony Newspage

A ROUNDUP OF ENVELOPE NEWS AND INFORMATION OF VALUE TO PRINTERS

NUMBER TWELVE

PUBLISHED BY OLD COLONY ENVELOPE COMPANY, WESTFIELD, MASS.
Envelope Makers for *Brown Company, Eastern, Hurlbut, Linton Brothers, Mead, Rising, Strathmore, Valley* and *Warren*

AUGUST 1948

## UNDER THE FLAP

By S. GUY ASHLEY
Vice President and Sales Manager

August! Quite a month for me . . . I have two anniversaries . . . You'd never guess! ! !

August! The ending of summer vacations, with Fall fast approaching when cool evenings are the shadows being cast by Old Man Winter.

Autumn has much in store for us . . . the ripe fruit coming in, the rich beauty of the flowers, the wondrous extravagance of color taken on by the leaves of the trees.

The coming of Autumn reminds us that it is time to start Christmas Season plans — particularly plans for Special Seasonal Cards and Announcements and their Envelopes.

The sooner you tell your paper merchant about your specialty announcement and envelope requirements, the more certain will be your chance of getting exactly what you want in time for holiday mailing — either from his stock or on his order from Old Colony, source of supply for really outstanding envelopes.

Announcements that embrace the charm and dignity of design worthy of your customers' exacting demands are made, as you know, by the Old Colony Envelope Company.

## ARE YOU ON OUR LIST?

The Old Colony Envelope Company maintains an extensive mailing list of printers and engravers who receive reprints of the *Newspage* each month as well as special material published from time to time such as the "Manual of Postal Information" and the "Envelope Die Manual."

If you are not receiving this material — or if you wish to have it mailed to other people in your organization — please drop us a line and let us know. We'll be very glad to oblige by adding your name — or theirs — to our mailing list.

## HOW TO GET BORDERING AT ITS BEST

Bordering — whether it be for mourning announcements, birth announcements, personal stationery or specialties — must be done superbly well to be effective.

Our long experience has indicated that top quality bordering is done only by hand — and long experience is needed to meet specifications that range from a minimum border of 1/64 of an inch to ¼ inch or more.

Skilled operators, time-tested methods and a wide variety of colors, crisp or delicate, are at your service at Old Colony.

## GREAT CARE IS NEEDED TO GET GOOD GUMMING

### The Twelfth in a Behind-the-Scenes Series On Making Quality Envelopes

Getting the best gumming possible is one of the most important factors in making fine envelopes.

But there's a lot more to gumming than meets either the eye or the tongue — you need the right ingredients, and a formula for compounding them.

During the war, some of the ingredients used in making gum could not be obtained and inferior substitutes had to be used. Now these essential supplies are back and making satisfactory gum is again possible.

The ingredients for gum used on envelopes made by Old Colony are the best money can buy. Old Colony's method of compounding was developed exclusively for us by one of the country's leading industrial chemists. The result is a superior gum.

Behind good gumming stand years of patient research in solving many complex physical and chemical problems. For instance, the strength of different papers varies and the adhesive used for each one must vary too, so that every seal is as strong as, or stronger than, the paper itself.

We will tell you more about the problems of gum manufacture next issue — and about how Old Colony has solved them.

*An exclusive compounding method makes superior gums for envelopes made by Old Colony. Above, the gum delivery cart for servicing machines with the proper gum for each paper.*

## INQUIRIES FOR ENVELOPE PRICES, SHIPPING DATES AND SAMPLES ARE HANDLED QUICKLY AT OLD COLONY

### Experts Give Exceptional Service Through Coordination of Inventory Control and Production Planning

WESTFIELD, MASS.—Printers and engravers, through their paper merchants, can rely on quick handling of their envelope inquiries by the Sales Department at the Old Colony Envelope plant.

Old Colony's sales personnel has acquired, over the years, a thorough knowledge of all phases of envelope manufacture. They know paper, envelope-making equipment, die sizes and styles, traffic and transportation. Their goal is to answer all questions — received by mail, telegram, telephone and teletypewriter — quickly and accurately.

A modern inventory control shows them, at a glance, how much stock, converted or flat, is on hand — and an equally up-to-date production planning system instantly tells how soon an order can be geared into the schedule.

Information on prices and shipping dates can be gathered in a matter of minutes. Most sample and special layout requests can be filled the same day — the others are taken care of the following morning.

Much of Old Colony's reputation for quick service is due to these experienced people.

## PERFECTION IS ASSURED IN WEDDING ANNOUNCEMENTS

Buyers of wedding announcements expect perfect merchandise — they are not satisfied if these items have a mar or blemish of any kind.

That is why *every* sheet of weddings made by Old Colony, from 100% rag through No. 1 papeterie, is inspected. Any sheet that shows a defect in either paper or workmanship is rejected.

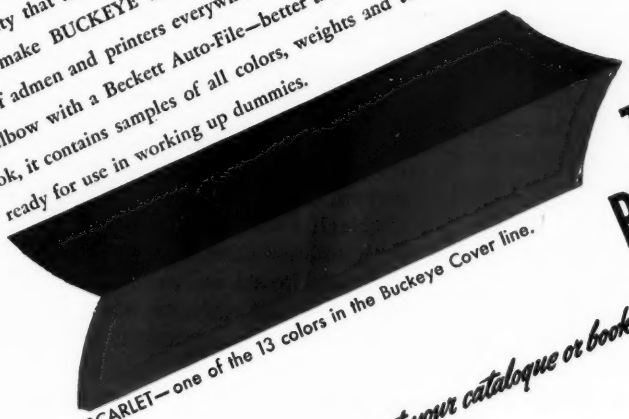
So, for assurance of satisfied customers, specify wedding announcements made by the Old Colony Envelope Company.

## FAMOUS COVER GIRLS
*by Benedict Frenkel*

"She's too tall for me," said Conover . . . "for me, too," said Powers, when Norma Richter first applied for work as a "cover girl." Two years ago, short girls had gone out of style and Norma found herself in demand. She has appeared on the covers of VOGUE, GLAMOUR and NEWSWEEK, as one of the 10 American Beauties in ESQUIRE. Although she practically commutes between New York and California, Norma has refused several Hollywood offers.

## FAMOUS COVER PAPERS
*by The Beckett Paper Company*

Color that catches the eye, texture that is pleasing to the touch, quality that assures long wear—these are the ingredients that make BUCKEYE and BECKETT covers the first choice of admen and printers everywhere. Keep inspiration at your elbow with a Beckett Auto-File—better than any sample book, it contains samples of all colors, weights and textures, ready for use in working up dummies.



SCARLET—one of the 13 colors in the Buckeye Cover line.

## THE BECKETT PAPER COMPANY

HAMILTON, OHIO

*If you want your catalogue or booklet to be read from cover to cover*

BE SURE IT HAS A COVER!

100 YEARS 1848 • 1948 THE BECKETT PAPER COMPANY

YES SIR-
That's my Baby!
"I'm proud of that baby!" says the Challenge chief design engineer . . . And you'll say the same thing when you get one in your plant.

NEW

## CHALLENGE Series K PROOF PRESS

There's nothing like it—a brand new series of Challenge Proof Presses—3 Styles—cylinder press design. The cylinder revolves while the reciprocating bed rides on anti-friction rollers, assuring accurate, unyielding impressions and very easy operation.

Sheets are fed to cylinder grippers and a micrometer side guide. A foot trip prevents offset on the cylinder packing during the return stroke of the press. The feed board slides back to provide clear access to cylinder packing. Grippers can be opened at any position of cylinder to release printed sheet.

Two sizes handle anything from an ordinary galley proof up to 14½"x23½" or 19½"x23½". Sold as shown (Style KE) with 20" ink distributor or (Style K) with ink plate only; also (Style KA) with automatic inker. All machines are equipped with feed board, delivery board, and a zinc galley plate for proofing forms when removed from the galley. Write for complete data at once!

**THE CHALLENGE MACHINERY COMPANY**

*Main Office and Factory:*
**GRAND HAVEN, MICHIGAN**

Challenge

*"Over 50 Years in Service of the Graphic Arts"*

**DEALERS IN ALL PRINCIPAL CITIES**

8 **Point:** How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing rave over a specific face of type? What do they see in it? Why is it so superlatively pleasant to their eyes? Good design is always practical design. And what they see in a good type design is, partly, its excellent practical fitness to perform its work. It has a "heft" and balance in all of its parts just right for its size, as any good tool has. Your good chair has all of its parts made nicely to the right size to do exactly the work that the chair has to do, neither clumsy and thick, nor "skinny" and weak, no waste of material and no lack of strength, and, beyond that, the chair may have been made by a man who worked out in it his sense of fine shapes and curves and proportions: it may be, actually, a work of art. The same thing holds for shapes of letters. And your chair, or your letter (if a true artist made it) will have, besides its good looks, a suitability to the nth degree to be sat in, or stamped on paper and **How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing**

*8 point on 9-point body*

**9 Point:** How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing rave over a specific face of type? What do they see in it? Why is it so superlatively pleasant to their eyes? Good design is always practical design. And what they see in a good type design is, partly, its excellent practical fitness to perform its work. It has a "heft" and balance in all of its parts just right for its size, as any good tool has. Your good chair has all of its parts made nicely to the right size to do exactly the work that the chair has to do, neither clumsy and thick, nor "skinny" and weak, no waste of material and no lack of strength. And, beyond that, the chair may have been made by a man who worked out in it his sense of fine shapes and curves and proportions: it may be, actually, a work of art. The same thing holds for shapes **How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of**

*9 point on 10-point body*

10 Point with *Italic* and SMALL CAPS: HOW IS ONE to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing rave over a specific face of type? What do they see in it? Why is it so superlatively pleasant to their eyes? Good design is always practical design. And what they see in a good type design is, partly, its excellent practical fitness to perform its work. It has a "heft" and balance in all of its parts just right for its size, as any good tool has. Your good chair has all of its parts made nicely to the right size to do exactly the work that the chair has to do, neither clumsy and thick, nor "skinny" and weak, no waste of material and no lack of strength. *How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the*

*10 point on 11-point body*

11 Point with *Italic* and SMALL CAPS: HOW IS ONE to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing rave over a specific face of type? What do they see in it? Why is it so superlatively pleasant to their eyes? Good design is always practical design. And what they see in a good type design is, partly, its excellent fitness to perform its work. It has a "heft" and balance in all of its parts just right for its size, as any good tool has. Your good chair has all of its parts made nicely to the right size to do exactly the work that the chair has to do, neither clumsy *How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-ma-*

*11 point on 12-point body*

LINOTYPE

# Times roman

[Reg. U. S. Pat. Off.]

TIMES ROMAN was developed in the search for a periodical face of distinction and legibility that would print well on all kinds and qualities of paper. The face has the added virtues of good color, material space economy, and the sturdy clarity of letter structure that has made it an excellent choice for either letterpress, offset, or gravure reproduction.

The design was developed after long and exhaustive trials under the direction of Stanley Morison and was cut simultaneously by both the English Linotype and Monotype companies as an interchangeable face.

Like many other good things, the war delayed the introduction of Times Roman to American printers. Linotype is glad to make this versatile series available now, initially in combination with its **Bold Face** in six useful sizes, from 5½ to 11 point. The *Italic* and SMALL CAPS series is ready also in five sizes, 7 to 11 point, with others in process. Long descenders are available for both series and will be supplied when desired.

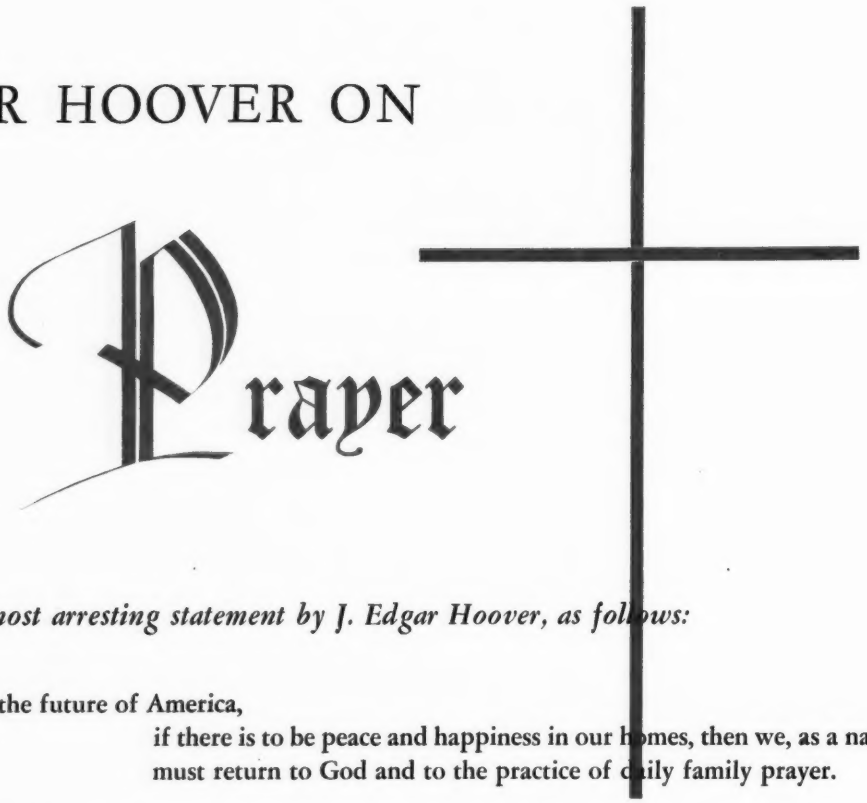
THE ALPHABET:

A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z 1 2 3 4 5 6 7 8 9 0
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

*A B C D E F G H I J K L M N O P Q R S T*
*U V W X Y Z 1 2 3 4 5 6 7 8 9 0*
*abcdefghijklmnopqrstuvwxyz*

**A B C D E F G H I J K L M N O P Q R S T**
**U V W X Y Z 1 2 3 4 5 6 7 8 9 0**
**abcdefghijklmnopqrstuvwxyz**

# J. EDGAR HOOVER ON




*Just ran across a most arresting statement by J. Edgar Hoover, as follows:*

"If there is hope for the future of America,
if there is to be peace and happiness in our homes, then we, as a nation, must return to God and to the practice of daily family prayer.

"Can we build homes without God,
or have worthy parents who do not know and practice His teachings?

"Our nation is sadly in need of a rebirth
of the simple life—a return to the days when God was a part of each household, when families arose in the morning with a prayer on their lips, and ended the day by gathering together to place themselves in His care.

"As our nation grew and prospered,
as it overcame vicissitudes and adversities, its people never lost faith in a personal God.

"Our generation, it seems, has allowed
old faithful religious practices to slip into oblivion. As a result, family life has been weakened and the nation has suffered.

"A Godless home is built upon sand;
it is an inviting breeding ground for moral decay and crime. My hope for the future of this nation is predicated upon the faith in God which is nurtured in the family."

*J. Edgar never said truer words in his life. Let's hope that many will take his admonitions to heart.*

*The Recorder*

*Leading Business and Technical Journal in the Printing and Allied Industries*

THE INLAND PRINTER

MACLEAN-HUNTER PUBLISHING COPRORATION

J. L. FRAZIER, Editor

AUGUST, 1948

# Profit-Sharing Imperiled by Court Rulings

By NATHAN C. ROCKWOOD

• MANY EMPLOYERS, particularly those in relatively small industrial establishments, believe the ultimate solution of labor-management harmony lies in profits sharing, or some other kind of incentive bonus over and above the "regular pay." Much progress was being made in this direction until the courts began to rule that such bonuses must be included in establishing "regular rates" of pay for the purpose of computing the one and one-half overtime rates, required by the Fair Labor Standards Act. That made rates more than employers had bargained for (literally, too, in many cases). Because of the utter disregard exhibited by some of their employes of this attempt to be fair and generous, through the filing of suits for enormous amounts of back pay, many employers have dropped profit sharing, and many others have been abandoning their plans to begin profit sharing.

### "Regular Rate" Ambiguous

This matter of computing overtime pay is one of several glaring weaknesses of the FLSA, brought out in hearings before committees of Congress, which presumably will lead to revision of the Act. The issue of defining what is the "regular rate" has highlighted many controversies over the meaning of hourly wage stipulations in union labor contracts, and in nearly every instance has been decided favorably to the most outrageous contentions of labor attorneys.

A recent decision by the U. S. Circuit Court of Appeals, Sixth Circuit (Cincinnati, Ohio), which incidentally has made other common-sense decisions in labor cases, is especially interesting for at least two reasons. It concerns a relatively small corporation, employing about 400, which would fit the great majority of American business enterprises, and it cleared the employer of wage liabilities of about $1,500,000, had the courts decided otherwise. Since this, like many such enterprises, is a single-commodity manufacturer, with no great amount of assets, an adverse decision could very well have put the firm into bankruptcy and deprived the employes and the community of a means of existence.

The case was tried originally in a U. S. District Court in Michigan and decided against the employe's contention for inclusion of all the profit-sharing bonus in computing "regular rate" so as to result in excessive overtime pay. The employe appealed to the Circuit Court of Appeals, which affirmed the lower court's decision. It seems doubtful under the circumstances if anything would be gained by union labor through carrying the case to the U. S. Supreme Court, but that remains to be seen. In any event those hardy employers who wish to continue or to start profit-sharing in spite of technical obstacles will be interested in the details of this plan, which has passed the tests of the lower courts.

The company makes abrasive products (grinding wheels chiefly) selling most of its output on specific orders—a highly competitive and not a particularly stable kind of industry. Realizing the relatively unstable character of the business, the company started a number of years ago to provide incentives and attractions for employes, which included a hospitalization plan, an annuity plan, group life insurance, and the profit-sharing benefit fund that is the core of this controversy. The fixed hourly wages were increased voluntarily from year to year, and everything seemed to make for one happy family until 1945, when this family was discovered and organized by a labor union. At that time the base rate was 90 cents an hour, having been that figure since 1942. After the passage of the FLSA, the company complied conscientiously with the forty-hour week and overtime provisions.

In order to meet the fluctuations in the business over a period of years, the company management devised a "Production Savings Plan," which was also designed to increase the production efficiency and make the employer better able to meet his competition. The district court judge was satisfied that the purpose *was not* to circumvent the law, as the employe charged, but was a realistic and workable arrangement, of which the FLSA administrator was fully advised.

### Description of Plan

In the language of the court the plan was described as follows: (1) A production value was given each item produced that entered the inspection department, which value was the list price less the trade discount. The total production value was calculated monthly with adjustments for the partly manufactured products. (2) A certain percentage of this monthly production value was then computed. This percentage bore very close resemblance to the direct labor costs of production in preceding years. At the inception of the plan it was 19 per cent but from time to time increased until it was 24 per cent in 1943, where it remained up to the time of this suit. (3) The total hourly wages in straight time and in overtime for those eligible under the plan was then computed for that month. (4) If the total of the hourly wages for the month exceeded the percentage of the production value for the

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month, the employes received no additional compensation, but if the total of the hourly wages paid was less than the percentage of the total production value, the difference was distributed to the employes as additional compensation.

The other steps were: (5) This additional compensation was distributed as follows: The amount to be distributed was divided by the total actual labor costs, including both straight time and overtime (less the hourly wages paid to ineligible employes), which resulted in a percentage figure. This figure became the bonus rate for that month. The employe's total monthly straight time pay and overtime pay was increased by this percentage. Since the plan had been in operation (1938) there had been only two months when no fund was available.

### *"Sincere Effort to Share"*

There was no provision in the plan for recovery from employes of any portion of the funds so distributed in the event the amount allocable in any month was less than the amount already paid to them at the fixed hourly rates. [That was just the employer's hard luck!] There was no way to determine what part, if any, of the funds available for distribution was due to the increased efficiency of the production employes, since it represented the combined result of numerous factors, including installation of new and improved machinery, improvement in engineering services, operation of the plant to more nearly its capacity, the efficiency of the sales department and of the management.

All this the trial judge found to be a sincere effort on the part of the employer "to share with its production employes not only any increased income resulting from increased efficiency of these production employes, but also a substantial part of the increased income resulting from its investment in improved machinery and from improvement in its engineering and management; and that the employment contract divides the incentive wages into regular and overtime segments in a realistic and mathematically workable manner." The appellant (employe) contended that the workers were actually paid on a piece-work basis, and relied on numerous court decisions (including the U. S. Supreme Court) as proof.

The Circuit Court of Appeals said: "This case is governed by determining the 'regular rate' at which the appellant was employed according to the Supreme Court's general definition thereof, instead of applying the rulings applicable to piecework employment. . . . It becomes merely a matter of mathematical computation. After first ascertaining the total compensation (which includes both the regular wages at the contract hourly rate and any bonus or profit-sharing) actually paid during the normal non-overtime work week, such total compensation is divided by the number of hours actually worked during the same normal, non-overtime work week (additional overtime work if any, being excluded in making such computation). The overtime work in that week is then to be paid for at one and one-half times this regular rate so computed. Applying that rule to the present case the appellant has been fully paid. The amount of the production savings available for distribution in any one month was allocated under the plan, part to straight time employment and part to overtime employment.

"The part allocated to and paid for straight-time employment was added to the wages received through the contract hourly rate for the non-overtime work week, and this total amount used in determining the regular hourly rate for that week. Overtime work in that same week was paid for at one and one-half times this rate, using in part for that purpose that part of the production savings allocated under the plan to overtime employment. Appellant's error consists in attempting to treat all the production savings as being paid for regular non-overtime work, although the plan, by contract, provides otherwise. There is nothing in the FLSA which prohibits such an allocation. There is nothing in the Act which requires profit-sharing in any manner or to any extent. If the appellee's [employer's] plan had distributed only a half, or a third or less, of the production savings, instead of all of it, and allocated the distribution entirely to straight-line work, it would not have been objectionable. It would have increased the 'regular rate' of pay with a resulting increased obligation for overtime. This increased obligation for overtime could have been paid out of the other half or two-thirds of the production savings which it did not distribute. Allocating such a portion of it to the employer's overtime obligation rather than merely withholding it, reached the same result."

### *Plan Fair and Adaptable*

Here then is a fair profit-sharing scheme, one adaptable to almost any kind of production enterprise, which apparently will pass the test of the courts. The only sour note is that after treating its employes so generously as did this employer, there should be any one so mean as to bring suit. By doing so, and putting the employer to the expense of fighting it through the courts, this employe certainly reduced the amount in the Production Savings Plan which would otherwise have been distributed for the benefit of all the workers. It is to be hoped that the experience hasn't soured the employer to the extent of abandoning the plan entirely.

## SHORTER WORK WEEK AFFECTS HOURLY RATES

BECAUSE of the effect on operating costs, employers should be interested in the effect of a shorter work week on the hourly wage rate. The following figures show the increase in the hourly wage rate when hours per week are reduced but the weekly rate remains unchanged:

A reduction from 40 to 37½ hours results in a 6⅔ per cent increase in the hourly rate. A reduction from 40 to 36¼ hours results in a 10⅓ per cent increase in the hourly rate. A reduction from 40 to 35 hours results in a 14.29 per cent increase.

A reduction from 37½ to 36¼ hours results in a 3.45 per cent increase in the hourly rate. A reduction from 37½ to 35 hours results in 7.14 per cent increase in the hourly rate. A reduction from 36¼ to 35 hours results in a 3.57 per cent increase in the hourly rate.

A shorter work week not only limits the amounts of production time per day at straight time hourly rates, but it also will increase the potential burden of overtime payments. This is an important factor at a time when there is a high volume of demand for printing and a shortage of skilled manpower in the industry.

We have heard it argued that men and machines can produce as much in 36¼ hours as they can in 40 hours. Maybe so, but will they? Now let's take this theory a little farther. The same argument was used when the work week was shortened from 44 to 40 and so on. Carry that idea to the extreme and eventually a man or machine can produce the same amount in nothing flat. That is one to ponder over.

*Milwaukee Graphic Arts Messenger*

### In This Third and Concluding Article ROB ROY Tells About a New

# Hand Composition System Designed to Meet Drastic Changes in Requirements

• AN INNOVATION which has been independent of the new case but which has had considerable influence upon its design is the availability of "shoulder spacing" on the Monotype.

Word spaces on the Monotype, which may vary in width by very small increments, have hitherto been produced on the caster as separate types, each requiring a pump stroke of the machine (Figure 1). Recently the Lanston Monotype Machine Company has made available "shoulder spacing," whereby each word space is not a separate character but an integral part—a shoulder—of the first letter of the following word (Figure 2). The advantage of this is two-fold: it saves up to 16 per cent of caster pump strokes on text matter, and it reduces the chance of "work-ups" on press, since the shoulder space cannot "ride" up and print. The saving in caster time is a very important economy and is achieved without extra cost on the keyboard.

#### *"Thin Terminals"*

In correcting the shoulder-spaced material, deletions and changes requiring an increase in the space between words do not present any new problems, since such added spaces may be inserted beside each shoulder space. Additions and any changes requiring a reduction of word spacing do present a new problem, since by ordinary methods such reduction could be obtained only by changing the first letter of each word along with the shoulder space cast with it. If this were done, the economy achieved in casting would to a great extent be lost during the correcting.

This problem has been solved by an ingenious and effective method devised by Wade H. Patton of the Monotype Company. Mr. Patton has tabulated the terminal letters of English words in common usage and has found that the eighteen characters shown in the lower left quarter of the case layout in Figure 9a (June issue) comprise about 98 per cent of word endings. Each of these characters has been cast two units thinner than normal (18 units = 1 em in the Monotype system). These "thin terminals" are used whenever it is necessary to reduce word spacing in making corrections.

The method may best be explained by example. If a 10-unit lower case d has been omitted in machine composition and is called for by the proofreader, the compositor will change the last letters of five words to thin terminals, thus reducing word spacing by the 10 units necessary to make room for the d which has been called for.

#### *Consult All Concerned*

Tests comparing the time required for thin terminal correction of shoulder spacing with conventional correction of separate spacing have shown a slight margin in favor of the old way. Actual correction time by thin terminals is slightly less than for separate spacing but this is offset by the increased inspection time necessary to avoid creating an error in a terminal letter. The over-all increase in correction time is very small and the machine economies of the shoulder spacing should be realized fully.

It may be pointed out that while shoulder spacing has been independent of the new type case, there has been a close correlation between the two. To adopt shoulder spacing requires thin terminals; to adopt thin terminals requires a change from conventional type case design. Effective advantage has been taken of this in changing to the new system.

Any new method as radically different as this one could hardly be

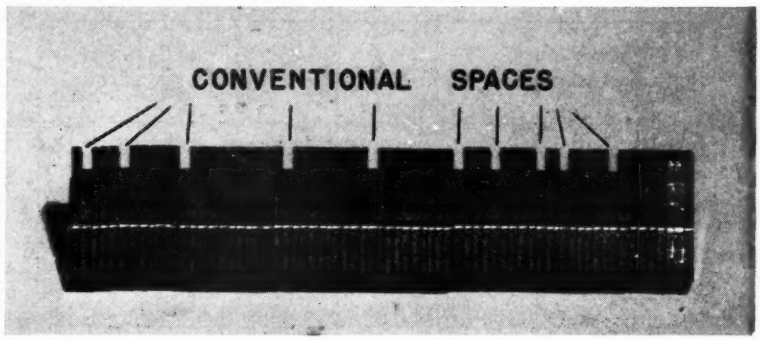



Figure 1. Line of Monotype, with conventional spacing requiring ten pump strokes to produce

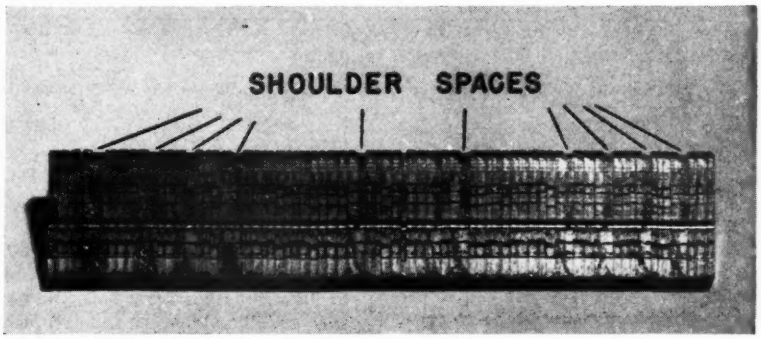



Figure 2. Line of Monotype with shoulder spacing. The shoulder spacing saved ten pump strokes

successful if held to the design ideas of a few people. In realization of this, considerable pains were taken at each step of the way to inform all who would use the new system about the plans being made. Advice and ideas were solicited and all suggestions given careful consideration. This approach not only enlisted the vitally important sympathy and interest of the compositors but resulted in many sound proposals for improvement.

The development of the cowl light, the layout of the frame itself, the determination of fonts to be kept at each cabinet, the galley-tilting device, special accent cases, important features in the department floor plan, and many other contributions have come from the compositors themselves.

#### Working Model Designed

Many of these ideas were advanced during the early experimental period. New cases, containing temporary cardboard boxes, were given thorough trial in actual service, in conjunction with the new box loading and sorting plan. A wooden mock-up of the proposed new frame was built and every compositor was asked to express his preference as to height, tilt, and reach. With this important information, a working model was designed and lighted and used in operation for several months. It was from experiments with this that the final lighting and frame design were evolved.

#### Conversion Program

To convert from the old cases and frames to the new ones a carefully integrated sorts casting and moving program was planned. Fonts most frequently used were converted to the new system first so that in a comparatively short time most of the work handled in the department was on the new basis. As each new font was sorted into boxes old type cases and reserve sorts were killed, and this plan was continued until the conversion was completed. During the conversion the remaining old cases were tiered.

Toward the close of the period of transition, time studies were made of hand-set lines from both the new case and the old. With the exception of one study, made on a compositor with relatively little old case experience, all of these showed that composition from the new case was slower than from the old. To ascertain the exact cause of this a motion picture was made of two compositors, each setting type both from an old case and a new case. Analysis of this film gave the results shown in Table 1. The figures shown are motion picture frame counts based upon averages of about twenty characters set.

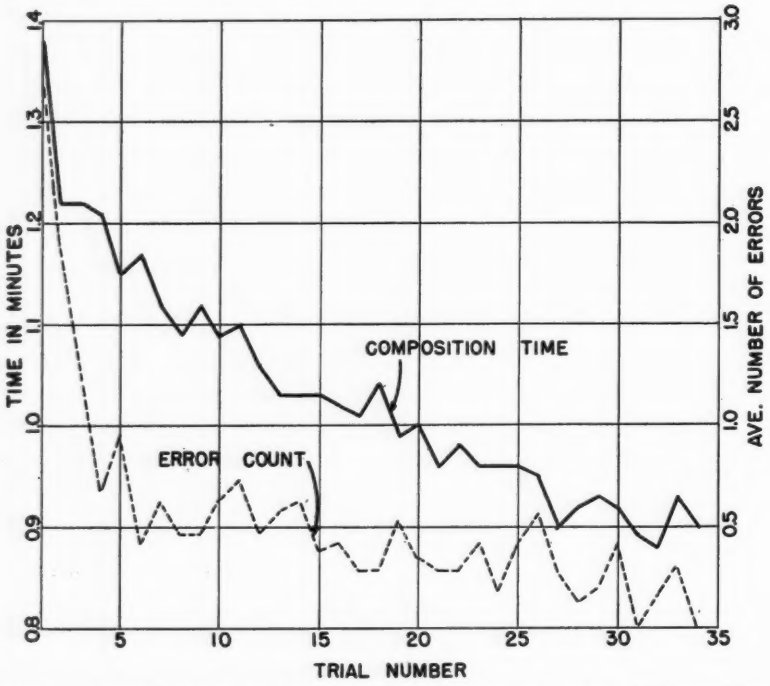



Figure 3. Composite learning and error curve plotted from composition test of 19 compositors

The table indicates that the reach (element 1) and carry (element 3) operations required a longer time from the new case than from the old, despite the fact that the distances involved are shorter. Element 4, place and release a type in the stick, is longer from the new case, despite the fact that this element should be independent of the case used. These factors pointed to the difficulty which hitherto had been suspected: that hesitation due to lack of knowledge of the new layout was slowing down composition.

To overcome this each of these men was given a daily practice session from a new case prepared for the purpose. This case differed from regular cases only in that it carried no box labels. In reaching for a given letter, therefore, the compositor could rely only on the position of the box as a cue and not on the label as well. The test was based upon use of the line: "The quick brown fox jumped over the lazy dog," and consisted of first pointing to the letters in succession with eyes open; second, pointing with the eyes closed; third, setting the line without justification; and, finally, distributing the letters carefully and uniformly back into the case. Each of the first three parts was timed with a stop watch and plotted on a learning curve. The errors made in part three also were counted and recorded.

#### Lessons on New Case

After about twenty daily lessons had been given a second film was made and analyzed with the results shown in Table 2. In each case the compositor had shown a remarkable improvement over new case results in the first film. Compositor A, a comparatively new man, had reduced his time about 26 per cent and had exceeded his former speed from the conventional case. Compositor B, with years of experience, had improved his speed more than 12 per cent, and his new case performance nearly equaled the old. Since it was not felt that the training sessions represented the ultimate in possible improvement, these results were deemed good and it was decided to give this same new case training to all compositors in groups of five per shift.

The results of this training are shown by the composite learning and error curve in Figure 3. This chart, based upon a group of nineteen compositors given the daily test, shows striking improvements in both speed and accuracy. From the maximum time of 1.38 minutes for setting the

line in the first test to the minimum time of 0.88 in the thirty-second test is a reduction of 36 per cent. More significantly, the reduction from the early plateau of 1.22 minutes to the final plateau of 0.9 minute is a gain of 23 per cent for the entire group. Errors, which had numbered 1.33 per man per day at the start, dropped rapidly to about 0.2-0.3 at the end of the period.

Following this test each "graduate" was timed composing the same line from a California job case. In view of the intensive daily practice on the new case this, of course, stacked the cards somewhat against the old, but this advantage was offset in some measure by the years of experience most of the men had had on the conventional case.

#### Composing Time Cut

In any event the results were so striking as to be clearly indicative. Average composition time was 1.17 minutes per line, compared to 0.9 from the new case, an advantage of 23 per cent in favor of the new method. In the old case trial a total of thirty-eight errors were made in the nineteen lines, an average of two per man, *ten times* the number of errors made from the new case.

The reason for such error counts in composition from jumbled type has been pointed out. To support this evidence, the same paragraphs, set without correction from a new case in regular service, are shown in Figure 4. *There are no errors.*

Initial operation of the keyboard with shoulder spacing involved removal of both of the regular keybars actuated by the space bar and substitution of a single special keybar designed especially for shoulder spacing. This substitution presented a problem when changing from conventional to shoulder spacing and back again, but this has been solved by carrying the regular second keybar in the machine and slotting the space bar to clear it when on shoulder spacing. With this change, shoulder spacing makes no extra demands on the operator and is set exactly like conventionally spaced matter.

On the casters it has been necessary to widen mold openings and adjust the top mold blade in order to cast wide initial characters plus shoulder spaces. When this has been done, this class of matter runs smoothly and well and yields the large economy sought. The saving, as has been pointed out, ranges up to 16 per cent of the pump strokes on full justified lines.

The crux of this economy lies, of course, in thin terminal corrections, for a marked rise in correction cost would consume all or more of the gain in the caster room. Shoulder-spaced type not only requires the new technique of thin terminal corrections but presents other problems as well. The usual method of using tweezers to remove the characters wanted from the galley or page is satisfactory in conventional spacing for there are openings caused by the low spaces in which to insert the arms of the tweezer (Figure 1).

This paragraph was hand composed from a new 10 on 12 No. 8A Roman type case which has been in regular use in the composing room. No wrong characters have been changed in the setting of these lines.

This paragraph was hand composed from a new 8 on 10 No. 8A Roman type case which has been in regular use in the composing room. No wrong characters have been changed in the setting of these lines.

Figure 4. Paragraphs composed without correction from new case in regular use show no errors

#### Time Study of Corrections

These openings are not present in shoulder-spaced type, for shoulder spaces themselves (except in very wide characters, part of which must cast against the top mold blade) are full height and leave no room for the insertion of tweezers (Figure 2). By spreading the line tweezers can be used but this method is more time-consuming.

To resolve this difficulty, search for a suitable bodkin was proposed and has been carried on by Howard P. Wampler, engineer for the company. After investigation of various dental tools, trial was made of an ordinary small fish hook, straightened and heat treated, and mounted in a small standard holding device (Figure 5). This ingenious bodkin is used by inserting the point between any two characters and withdrawing the one wanted on the barb of the hook. The tool, which is still under trial, is not only effective and rapid in use but inexpensive and convenient, for dull points can be renewed simply by replacement.

Time studies of thin terminal corrections made with the aid of this bodkin promise to show a reduction over the former requirements. The

Analysis of First Film. Exposure rate: 16 frames per second.

| ELEMENT | COMPOSITOR A | | COMPOSITOR B | |
|---|---|---|---|---|
| | New Case | Old Case | New Case | Old Case |
| | frames | frames | frames | frames |
| 1. Reach for type | 6.9 | 5.7 | 5.6 | 5.0 |
| 2. Select and pick-up | 7.6 | 5.7 | 4.2 | 3.8 |
| 3. Carry to stick | 11.6 | 8.0 | 7.2 | 6.3 |
| 4. Place and release | 3.2 | 2.6 | 2.2 | 1.5 |
| TOTALS | 29.3 | 22.0 | 19.2 | 16.6 |

TABLE I

Analysis of Second Film. Exposure rate: 16 frames per second.

| ELEMENT | COMPOSITOR A | | COMPOSITOR B | |
|---|---|---|---|---|
| | New Case | Old Case | New Case | Old Case |
| | frames | frames | frames | frames |
| 1. Reach for type | 5.4 | 6.1 | 5.1 | 4.8 |
| 2. Select and pick-up | 6.7 | 8.5 | 3.9 | 4.5 |
| 3. Carry to stick | 7.5 | 9.4 | 6.2 | 6.1 |
| 4. Place and release | 2.0 | 3.0 | 1.6 | 1.2 |
| TOTALS | 21.6 | 27.0 | 16.8 | 16.6 |

TABLE II

Figure 5. Enlarged view of fish hook bodkin

economy of shoulder spacing on the caster should be realized at no extra cost in the composing room.

Following the completion of the daily test on composition described above, each compositor was asked to express his opinion of the new system in a questionnaire which covered lighting, adjustability, frames, cabinets, galley tilters, cases, and layouts. Questions were framed with responses ranging from approval to disapproval and compositors in no case were obliged to identify themselves in their replies.

Space does not permit a complete report on the answers received but they were, on the whole, strongly in favor of the new system. Of the detail responses 77 per cent were favorable and 23 per cent unfavorable. In no case was any single questionnaire unfavorable in all responses.

### *Results from New Case*

From the results reported it seems fair to draw these conclusions:

1. The difference between the new method and the old requires intensive training in case layouts by means of supervised and measured hand composition.

2. The conduct of such tests yields large gains in speed of composition and accuracy.

3. Speed of composition from the new case soon equals and exceeds that developed with the old case and ultimately the speed should be uniformly faster.

4. Accuracy of composition from the new case, because of its orderly arrangement of type, greatly exceeds that from the old case.

5. Shoulder spacing may be keyboarded for a small investment cost and no additional operating cost.

6. Shoulder spacing may be cast with a considerable net saving in pump strokes and caster time.

7. Thin terminal corrections of shoulder spacing, as yet still under investigation, promise to be no more costly than regular correction of conventional spacing.

8. The new system has met with the wholehearted approval of those who use it.

### *Production Index Rises*

These conclusions are supported by the production index of the composing room, which has risen from 107 in May, 1947, to 126 in July, 1948.

Contributions toward the development of the new system have been so numerous and have come from so many sources that only inadequate thanks can be expressed here. In the foregoing pages the names of William E. Blake, Howard H. Tunis, Vernon P. Scheidt, and Howard P. Wampler have been given. These are employes of Waverly Press, Incorporated, who have played vital parts throughout the project. To their names should be added that of John Munnikhuysen, for notable assistance in the difficult task of devising and operating sorts records, labels, and accents. From the composing room staff Charles Wyatt, Dick M. Hoover, Henry Shea, Harry Pullara, Eugene Hoover, James B. Meehan, Robert Lambert, and numerous others have contributed their ideas, their time, and their support.

The idea of correcting shoulder spacing by using thin terminals is the achievement of Wade H. Patton of the Lanston Monotype Machine Company, and to him and to Joseph S. Costello, president of the Monotype Company, thanks are due for constant interest and invaluable assistance.

For aid in procuring the necessary materials during a critical time we are obliged to A. E. Weber of the American Type Founders and to the late William A. DuBoc of the Hamilton Manufacturing Company. It is a source of regret that Mr. DuBoc did not live to see the completed task.

Adequate thanks cannot be expressed to the men and women in the composition departments of the Waverly Press for their uniformly splendid spirit and co-operation. Their willingness to try the unusual, to learn new things, and to contribute their own ideas has made the entire project a pleasure, and played a much appreciated part.

One final acknowledgement is due: Were it not for the progressive management of the Waverly Press, it is unlikely that this idea would have been born, and is certain that it would not have been carried to completion. For their willingness to venture into this new and unknown field thanks are due to friends and associates of many years, William M. Passano, president, and Edward M. Passano, vice-president of the Waverly Press, Incorporated. Above all our greatest debt is to the late Edward B. Passano. If this article may have a dedication, it is to his memory.

## QUESTIONS
# IT'S A QUIZ

*Answers to the following questions have appeared in the pages of THE INLAND PRINTER and other sources of information to printers at various times. How retentive is your memory? How many of these questions can you answer without turning to the answers on page 68.*

1. **The two** characters usually found on small sizes of slug-machine matrices are always the same size of type. True or false?
2. **Paper** production increased in 1947 over 1946, to more than 21 million tons. What was the percentage of increase?
   a. 5% c. 7% e. 9%
   b. 6% d. 8% f. 10%
3. **The ink** will always rub off on genuine steel and copper-plate engraving. True or false?
4. **Why** is most large-sized printing lithographed rather than run by letterpress?
5. **How** will undue "punch" in type reproduction proofs affect the type when printed offset?
6. **The new** Fotosetter, which makes films of type rather than cast slugs, has a keyboard identical to the usual slug machine. True or false?
7. **Ten-point** Regal lower-case is larger, or is it smaller, than 14-point Cloister?

**By R. Randolph Karch**

THIRD PRIZE LETTER ON

# "Why I Like the Printing Business"

BY

**GEORGE MACRAE HENDRY**

Geraldton, Ontario

Mr. Hendry insists that as careers go his is yet to begin. It seems to be well launched, however, and his course carefully charted. His first printing training was in the night schools of Toronto where he studied type composition two evenings and presswork two evenings a week. His intense interest in mechanics—his youthful urge to experiment, to tear apart, and reassemble—seems to make him well suited to his present duties of looking after the shop end of a printing company recently formed by himself and two other ex-service men. (He is also vice-president of the company.) "Our limited experience has at least one advantage," he comments, "We're free from prejudices of earlier days."

★ ★ ★

Contest Editor
The Inland Printer

Dear Sir:

Prior to the recent war I didn't know the printing business existed. Now it is the most important thing in my life.

I grew up in an atmosphere of physics. Everything that verged on the electrical, chemical, or mechanical was my pursuit. I studied, experimented, tore apart, put together and re-assembled. Emergence as an engineer of sorts was almost a foregone conclusion. Unfortunately for my peace of mind I had another chain of interests—music, drawing, and history. Easy as I felt it would be to earn my living in a mechanical position, I hated the thought of ceaseless work at a vocation lacking the necessity for appreciative, creative treatment of each single unit in the day's work.

Frankly, I worried about my future life's work all through the war. What fields are there wherein the artist cum mechanic (mostly mechanic) can exercise his talents to the widest possible degree? By the merest chance I slipped into a position in a small printing firm. The first day there I knew I was home. Before I knew what a brayer was I knew I had found my life's work.

The principles of business apply alike to all types of business. But the reasons within the printing business which attract me so greatly are, if not unique, at least wholly satisfying.

First and chiefly, here is the field of work which affords me every opportunity for manual, creative, and mechanical work, always careful to a degree and often most exacting in detail. It affords me an infinite field for experiment, to improve, to expedite, to compete. And, never absent for a moment, the gentler side—the need to attract, to design, to persuade, to balance, to seem clean and wholesome—to create atmosphere.

The second basic reason is the limitless scope of the graphic arts field. Starting with letterpress we have added a small litho unit (on which we now print our weekly newspaper) and are installing platemaking equipment. I realize that my horizons are boundless—all the complexities of film and photo work—the exciting developments in fluorescent, color, and other processes, are mine to enjoy. We benefit by the modern developments, the ceaseless research of all in the industry. Every new idea or machine provokes me to more enthusiastic calculation.

I do not just work in the printing business, I revel in it. In two years, by working twelve to twenty hours a day, I edged my knowledge and experience onto a sustaining level. And it's not work, really. Maybe that's the art part of it. But I guess I'm just lucky that I found the right spot in the world. I know many people who have not been so fortunate, and sympathize with them very sincerely.

The long nights with diseased linos, et cetera, belong on the other side of the fence. Every job has its irksome little necessities.

And that's the story. It's a fact. And if chance wills me the $40 I'll sink it all in textbooks!

Sincerely,

GEORGE MACRAE HENDRY

# Magnesium Playing Increasingly In

**By June Walraven**

● LIGHTWEIGHT magnesium alloys are finding increasingly widespread use in the printing and engraving fields as their advantages for mechanical and photoengraving and their reportedly excellent press life are established.

Magnesium's properties make it a natural for the printing and engraving industry. Incorporated in the new magnesium alloys used for photoengraving are smooth etching, high strength along with fast processing, dimensional stability, good machining, high purity, a fine grain structure, and light weight. The majority of these are repeated in the alloy used for mechanical engraving, but in this field, the light weight and easy machinability are of major importance.

Hand finishing of letters, necessary in mechanical engraving, is made easy with magnesium plates because of metal's ready machinability. (Photo courtesy the Dow Chemical Company)

The idea of using magnesium for engraving, and more especially for photoengraving, is not new. The Germans were the first to use the metal in this application. Because of its own production of magnesium alloys, the Dow Chemical Company began the research work which has finally advanced the technique of using magnesium to the point where it can be recommended for production operations in this industry.

Magnesium's excellent machinability has for years made it an ideal metal for mechanical engraving where lines are routed rather than etched.

Because mechanically engraved plates are used primarily where deep relief for printing is necessary, as on cardboard cartons, burlap bags, or other soft materials, the plate must be thick so that sufficient relief can be obtained. Here magnesium's light weight is an important handling factor, and allows plates with sufficient rigidity to be used because of the weight saving factor of this alloyed metal.

### *Special Alloy Developed*

Magnesium, like most metals, must be alloyed in order to be put to efficient use. No single magnesium alloy could meet all requisites so a special alloy had to be developed for photoengraving. This development was a modified Dowmetal FS-1 alloy, not the result of chance, but of more than six years of intensive laboratory study and investigation of the highly specialized problems related to engraving.

As a result of this patient investigation, research has progressed to the point where magnesium is in a position to compete with copper and zinc, long the major metals in the engraving field, allowing a single metal to serve the entire field.

Magnesium is only one-fifth the weight of copper, one-fourth that of zinc, and the weight saving pays immediate dividends in the ease of handling, speed of processing, and added workman safety.

### *Both Coarse and Fine Screens*

Magnesium 11-point plate is 40 per cent lighter than an equivalent area of the 16-gauge zinc which has gradually been adopted because of the excessive weight of 11-point zinc flats. By using magnesium, a return to the more rigid 11-point plate is possible, because while a 30- by 40-inch 11-point zinc flat weighs 48 pounds, a magnesium flat of the same area weighs but 12 pounds.

Magnesium can be used for halftones from 55- to 200-line as it has exceedingly fine grain which allows its use for both coarse and fine screen work, permitting the shop space for zinc and copper to be combined into the smaller space which is necessary for the processing of magnesium alone.

Glue-top, cold-top, and ink-top (albumen) enamels can be processed on the magnesium with excellent results.

Cold-top enamel, too, is popular for use on magnesium, and warming either the plate or the developer causes rapid development and produces a clean flat.

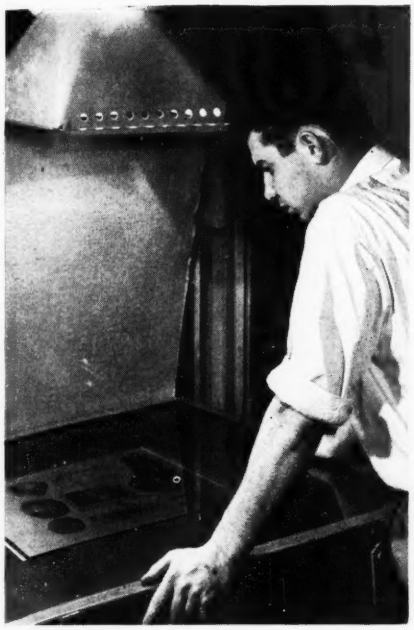
The general procedure used for processing zinc is now used for magnesium, with slight modifications. If the plate is rapidly handled through the pumicing operation, magnesium may be processed in the standard zinc manner. Once residual pumice powder is removed from the plate, excess water should be shaken from it before beginning the flow of cold-top enamel.

### *Many Favorable Qualities*

A given amount and concentration of nitric acid dissolves nearly twice the volume of magnesium before the bath depletion than it does zinc. Consequently magnesium

For mechanically engraved plates, used principally where deep relief is essential (as on cardboard, burlap, et cetera), magnesium is an ideal metal. Light weight makes handling easy

# ly Important Role in Graphic Arts



Printing or transferring stripped-up camera negative to sensitized magnesium plate. Sometimes proof of form is pulled (with special ink) directly on plate—eliminating any camera work

etches faster than zinc even in half-strength nitric acid baths, saving 50 per cent in acid costs, and providing healthier etching room conditions since the amount of toxic nitrous oxide fumes present has been minimized.

On powder burn-in operations, magnesium heats and cools more rapidly than zinc because of magnesium's comparatively high thermal diffusivity.

Due to magnesium's metallurgical characteristics, there is less tendency toward side etching or undercutting.

#### *Good Wear Resistance*

Magnesium photoengraving plates with a 0.0002-inch to 0.0003-inch layer of chrominum deposited by a recently developed Dow Chemical Company process, have withstood 19,000,000 impressions at latest report and remain in perfect condition. From this it is evident that plating improves on magnesium's already good wear resistance, allowing its projected use in printings where long life is essential. The combination of hardness and wear resistance of plating, as well as other economies, should greatly expand the metal's use in the photoengraving process.

Already stereotyping, electrotyping, lead transfers, and also plastic replica operations have been successfully employed with magnesium engravings with gratifying results.

Magnesium, upon repeated heating and cooling cycles, shows only negligible distortion. Because zinc recrystallization will occur at room temperature, any subsequent heating immediately makes it a candidate for grain growth. Magnesium and copper, with their higher recrystallization temperatures, can maintain register on repeated heating and cooling cycles.

Since the temperature required to ignite magnesium must approach the melting point of the alloy used, there is no more danger of fire with magnesium than with other materials normally associated with engraving shop operations.

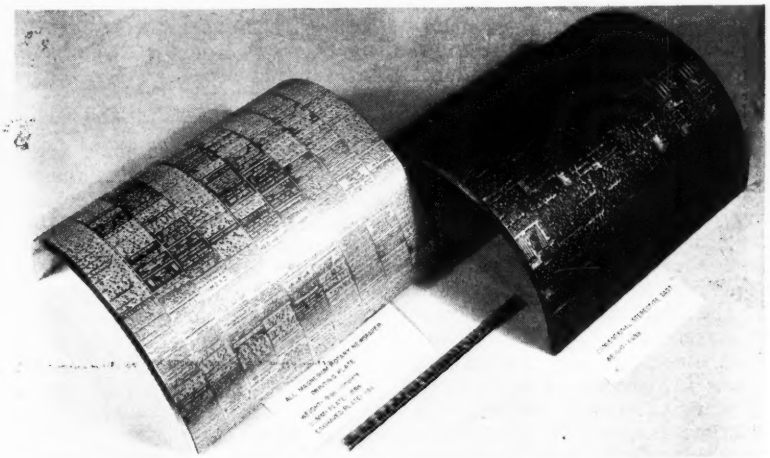
The press life of magnesium can equal that of copper and brass and is considerably longer than that of zinc.

Magnesium is being successfully employed as the back-up plates for rubber, electrotype, and direct printing plates where rigidity combined with light weight is essential. Rubber-coated magnesium rolls for continuous design printing allow ease of handling and higher press speeds.

Blocking bases for bringing plates type high are being cast in panels two feet square. These ribbed magnesium castings can be cut up in desired sizes and mounted with adhesives, and their main advantage is their considerably lighter construction and attendant ease of handling. The blocking base is already available in limited quantity.

#### *Magnesium Chases Tested*

In the same energy-saving category are the magnesium chases, bearers, and furniture which are in service test stages, and proving so satisfactory that they may be expected to replace steel for such uses in the future.



All-magnesium rotary newspaper printing plate weighs but 9 pounds compared with stereotype cast weighing 46 pounds. Magnesium plates can be used for halftone screens from 55 to 200-line

Plates are made by locking the form on a proof press with an offset rubber blanket around the cylinder. An impression is made on the blanket, then a sheet of magnesium replaces the form on the proof press. The blanket impression, made with etching ink, is transferred to the sheet. The plate is etched after the ink has been powdered and burned in. Because the metal etches so quickly, the acid bath is weak. Thus the resultant plate is one step closer to the original than an electrotype.

An industry takes on new life when new materials are introduced for its inspection, consideration, and evaluation. Magnesium has brought just such a progressive air into the printing and engraving industry.

# A PROFIT-SHARING PROGRAM COMBATS UNREST OF LABOR

BY A. C. KIECHLIN

● PROFIT-SHARING or profit-participation plans are being sponsored as the most effective way to maintain employe goodwill in these days of labor unrest. Employes share in the profits they help earn.

To illustrate the fundamentals of profit-participation, we outline the basic formulas underlying the application of these plans. All printers, regardless of the type work done or the size of the plant, may utilize these formulas but the figures and application must be adjusted to suit individual requirements. No standards can be fixed for all printers, because the costs and operational methods vary with the plant, but the general formulas are adaptable and can be applied effectively.

Under one basic formula, after computing the net profit, 6 per cent interest on invested capital is set aside and 4 per cent of the net, in a reserve fund, the remainder divided 30 per cent for employes, 70 per cent for the business, the shares allotted employes divided equally among them. Statements are prepared each quarter. If employes must wait until year's end to get their cut, they will lose interest. If you prepare monthly profit and loss statements, you may issue statements to the employes monthly.

### *Reserve Fund for Losses*

To keep labor turnover at minimum, employes may draw 50 per cent of their allotments each quarter, settlement in full at year's end. Before this plan can be put into effect safely, the printer must review yearly figures to determine what he can afford to share. It would be dangerous to take the figures out of your hat.

During a loss-month, the reserve is tapped to break even. Employes are not asked to share in losses even if the reserve dries up. In all fairness, they should share in losses, but it is hard to make employes see this because the ranting of some labor leaders have created the belief that business is always profitable. The reserve set aside to take care of losses is the best answer to this problem but it suffices only for monthly or short-period losses that come to every business. If a printer has hard-sledding for a lengthy period, profit-participation would stop until business warranted its resumption.

Another plan that has worked successfully with salesmen is based upon selling expense. First, determine the yearly selling expense, say $6,000. Then figure the average selling expense to sales, say 10 per cent. This means that a printer should do $60,000 yearly. On business done in excess of this amount, a certain percentage based on their salaries is paid to salesmen.

### *Percentage of Net Profit*

If selling expense should bring $60,000 yearly volume, and volume totals $67,800, or $7,800 more, the salesmen, on the basis of 10 per cent profit-participation, would receive $780. If your salesmen received compensation as follows:

| | | | |
|---|---|---|---|
| Employe A | $2,000 | 33.3% |
| " B | 1,500 | 25.0% |
| " C | 1,200 | 20.0% |
| " D | 1,300 | 21.7% |
| Total yearly payroll | $6,000 | 100.0% |

The $780 profit-participation fund would be allocated as follows:

| | | |
|---|---|---|
| Employe A | $260 | 33.3% |
| " B | 195 | 25.0% |
| " C | 156 | 20.0% |
| " D | 169 | 21.7% |
| Total paid selling employes | $780 | 100.0% |

Profit-participation is most effective when all share. This assures teamwork. Plans whereby a group of employes are pitted against one another create jealousy and hard feeling, often do more to depress gross sales and profits than increase them, even though certain employes may exceed their quotas and get more money. The printer could use the foregoing formula for the entire plant by computing the salesmen's cut on selling expense, and plant workers and office workers on plant and office payrolls.

Paying added compensation on the basis of sales figures is hazardous because until the figures are compiled, the printer does not know how much net he earned on sales. We have known cases where printers paid added compensation on the basis of sales and discovered subsequently that their profits were nil or they had lost money.

Profits differ on jobs. Often the small-profit jobs are easiest to sell, so salesmen working on some sort of a bonus based on sales get heavy volume on the low-profit jobs, sell few of the better-profit jobs, and the printer is left holding the roller. Base your profit-sharing payments on a percentage of net profit and do not pay off until you know your net and have considered the income tax you will have to pay on it.

Some profit-sharing plans are based on savings effected on production. Each month costs are budgeted and half the savings allotted to workers. If sales increased during the month, the employes get an additional windfall because the overhead percentage to sales is further reduced. Under this plan, the production workers receive substantial benefits if the salesmen are on some sort of a profit-sharing basis, either participating the same as production men, or on the basis of selling expense to sales as explained.

### *Keep Plan Easy to Figure*

The percentages of savings allotted to workers run from 25 to 60 per cent and are based on salary earned, length of service, or position held. If the printer wishes to use different profit-sharing formulas for plant workers, office help, and salesmen, this is okay providing the formulas are easy to calculate and process for the payroll. Many profit-sharing plans have failed because they were too complicated, took too much time to figure out, confused employes, creating misunderstandings, and caused eventual disinterest among employes.

Wage incentive plans based upon the production output are not true profit-sharing plans. In our opinion, they will not work out well in this industry because of the diversity of jobs and other variables which would require a great deal of recording. Other industrialists have had their headaches with the wage incentives because 80 per cent of employe grievances involve the correctness of the standards upon which wage incentives have been based. During the war, standards were set haphazardly, which makes it hard to administer them today. Then too, higher costs and taxes

have made it necessary to revise standards, wage incentives, and the bonus figures to safe postwar ratios and rates.

The printer who is operating some sort of a wage incentive or bonus arrangement based on production had better check his figures to make sure that they are within the bounds of his wallet. The use of wage incentives based on output requires the creation of standards, or a production norm, beyond which the premium payments are made. If these standards are inaccurate, either employer or employe is getting an unfair cut.

### *Everyone Should Benefit*

Standards are based upon experience figures, time studies, and test runs to arrive at a normal yield. A worker who is able to cut production time below standard is paid on his efficiency basis. If a job is set at 100 standard hours and the work is done in 80 actual hours, divide 100 by 80, giving an efficiency rating of 125 per cent. If wages for 100 hours are $100, the worker with this efficiency would receive $125. This is the basic formula but it has numerous variations.

Profit-sharing demands accurate recordings. A printer cannot utilize this plan effectively unless he keeps complete and accurate financial accounts and the necessary subsidiary records, depending upon the plan, such as a budget, cost sheets, profit and loss statements, and so on.

Profit-sharing should benefit boss and worker. If it gives away some of the normal profits earned, the employes benefit, the employer doesn't, hence the printer must pair his plan with aggressive promotion and good recording practices. He should do his best to increase volume, his salesmen should co-operate to the same end, and plant workers give maximum efficiency so that costs are kept at minimum, thus all benefit. That is the goal of profit-sharing, which can be applied in the printing industry as elsewhere, for business betterment.

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DO YOU KNOW

THAT in 1794 the total number of literate persons in England was estimated at 80,000 which did not then justify improvement of mechanical printing means?

THAT title pages were not used until about fifteen years after the invention of printing?

THAT twenty-four 3-point leads 24-ems long weigh one pound?

*—M. & M. Inkling.*


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## *Detroit Printing Apprentices Designed These Prize-Winning Ads*

One of the highlights of the apprentice training program of the Detroit printing industry is the annual typography contest.

Apprentices are furnished with copy and cuts for a newspaper advertisement 42 by 60 picas in size, and whatever type faces are available in the apprentice school. From there on they are on their own—with the interesting results shown on this page.

Out of seventy-nine ads submitted in this year's contest, Sol Hess, Monotype Company's art director, awarded prizes to the five entries reproduced on this page. Top, left is first-prize-winning design. At the left is the second-prize winner. Below, left, third prize. Above, fourth; below, fifth.

RCA-VICTOR RADIOS

New 1948 RCA-Victor Console Model

An amazing development of RCA-Victor research brings you for the first time the Golden Throat tone control, for FM and Standard Broadcast. You'll marvel at the silent automatic record changer that gives you flawless reproduction of records old and new. Modern cabinet, highly polished, in striped and heart walnut veneers.

$199.50

Combination Table Model

A modern styled radio-phonograph combination that will give you years of enjoyment and pleasure. Here are some of the outstanding features: the Golden Throat tone control for standard and foreign bands, plays up to 12 records automatically with the Silent Sapphire pick-up, built-in aerial and ground, plus cabinet in gleaming walnut.

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May We Suggest . . .

*for that Special Occasion!*

CANDLE HOLDERS

Nothing quite compares with the loveliness of our fine cut-crystal sparkling against fine linen. The center candle holders may be removed and used separately. Four pieces 8.50

BOOK ENDS

For elegance of modern styling . . . to grace your home! Distinctive bronze book ends on light onyx base. Boxed to make a wonderful gift. An "extra" worth having. 25.00

COCKTAIL SET

This smart seven-piece cocktail set will add new importance to your home . . . new elegance to your entertaining. A gift you can't afford to miss. Only a few left at this price. 5.00

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# Made-to-Order Rotary Presses Are High Production Tools of Industry

By Arthur A. Stuebe
Production Manager of Cuneo Press, Inc.

● ROTARY PRESSES are the high production tools of the printing industry, used generally for newspaper printing, catalog work, and large editions of publications.

These presses are a made-to-order product, designed to accomplish certain specific operations involving the size of signature, number of colors printable, the type of folds, the number of pages per signature, the speed of operation, and so on.

Important factors are the circumference of the impression cylinders which is usually referred to as "cut-off," and the width of the impression cylinders which determines the maximum width of the paper roll. These are the same factors that would concern a purchaser of sheet-fed presses, same being identical to the largest size sheet printable. The circumference of the impression cylinders cannot be varied and therefore the "cut-off" is a fixed size. However, the width of the roll can be varied within certain limitations.

Rotary press manufacturers such as Cottrell, Goss, Hoe, Babcock, Scott, and Kidder are building single-color and multicolor perfecting presses up to five colors. They are usually equipped with built-in folders. The majority of modern rotary presses are equipped with one folder; some have two folders, one or the other or both being geared to meet specific production requirements. The most modern folders can be made to deliver multiples of four pages, eight pages, twelve pages, sixteen pages, twenty-four pages, or thirty-two page signatures, parallel or right angle folded.

Some rotary presses are built with rewinders for roll delivery or flat sheet delivery for further processing. The size of each press depends on the signature size and the number of pages it will print, which range from 32 to 192 pages; the most popular are 64-page and 96-page presses. Single-deck presses generally are built up to 64 pages and double deck presses from 64 pages to 192 pages, with rated speeds ranging from 3,500 to 40,000 revolutions per hour.

Occasionally a roll-fed rotary press can be adjusted to print a lesser number of pages in order to increase the color capacity. To exemplify this adjustment, a one-color perfecting press of 96-page capacity using two webs might be changed by web leading to a two-color perfecting press using only one web, reducing the number of pages to half capacity. A two-color perfecting press with two webs might be similarly made into a four-color press by using only one web.

Before the invention of heat-set printing, the rotary presses were equipped with smut-roll devices, using treated tympan paper to prevent offset. Heat-set inks and special gas-heated ovens have eliminated the use of smut-rolls. Many old rotary presses have been converted to heat-set printing to compete with the more modern presses of greater speed and better quality printing, both single and multicolor.

The heat-set equipment consists of open gas burners. The traveling web is passed through the open flame and ink solvent is removed chiefly by combustion and also to a lesser degree by volatilization. High boiling petroleum solvents in the ink are a necessity in heat-set printing in order to minimize ink drying on the rollers before reaching the printing plate; hence high oven temperatures are necessary. Delicate adjustment of the open gas flame is important because insufficient heat will result in wet printing, while too high temperatures of the burners will cause scorching and web fires.

A relatively new means of heat-set drying is the steam drum type of drier. Steam is passed into a steam drum which turns at the corresponding speed of impression cylinders. The drum is encased in a housing through which the circulated hot air is passed. The paper web is in contact with the steel drum on one side and with the circulated hot air on the opposite side. Solvents are removed solely by volatilization and no combustion takes place, which reduces the possibility of scorching.

Steam-set inks, another new development, rely upon setting the ink by the use of a water-miscible solvent. Water becomes intimately mixed with the ink solvent and precipitates the resin and pigment onto the paper. Steam is used as a source of water because it can be more finely dispersed by this medium. Diethylene glycol is the solvent used. Steam-set printing so far has found very little acceptance in the field of publication printing for numerous reasons: certain type pigments tend to bleed in the solvent, special wash-ups are necessary and in some cases special rollers; halftone work will fill up and produce specking unless plates are absolutely clean. On the other hand, food wrapper and carton printers can use steam-set inks to good advantage, because they are odorless and fine screen work is not an important factor.

Modern high-speed rotary presses are equipped with fully automatic reels (the roll changers), automatic tensions, and flying pasters. The device is such that a new roll is put on the changer while the press is running. When the running roll is about used up, the new roll swings into running position; flying paster is made; the impression upon all cylinders is automatically lifted and proper tension applied to the web, all while running at a good speed. This saves time, also paper because the heat-set ovens are idled during this period to eliminate burning out the web.

Imposition layouts are based on the untrimmed signature size following methods similar to flatbed layouts; however, there are bleed limitations that must be considered because of fixed cut-offs and limited roll widths. No extra margins for gripper, off end or side grippers are required.

Spoilage allowance on roll stock must include wrapper strip and core waste in addition to the regular printing and binding waste. This extra waste on normal stock thickness which is from 38- to 50-pound basic weight, amounts to 2 per cent.

Rotary printing plates usually are lead mold nickeltypes or nickel shells made from plastic molds backed up with lead to the required thickness and curved to fit the plate cylinder.

Stripping, cleaning, and gearing-up are operations required before starting a new job. Stripping means taking off the old plates and hooks and gearing-up refers to the folder, changing from one particular signature to another.

This only covers a small aspect of rotary press printing; to become fully acquainted with all its possibilities, all its tremendous detail and complicated set-up as to imposition layouts, folders, and deliveries would require a great deal more space.

# Density Is Important Factor

• ON NUMEROUS occasions mention has been made in these columns of the term "optical density" or the "density" of a negative or a positive. Many works on photography have used this term, and a number of publications directed to the attention of lithographers have made use of this measurement as a means of obtaining the desired results, both in color and black-and-white reproduction.

At present it appears that the understanding of the meaning of this term and its application to lithography may soon be essential to good craftsmanship. Pressmen, platemakers, artists, and dot-etchers, as well as cameramen, will find that an understanding of this useful "tool" can improve the quality of the work they turn out, and often make the job easier.

### *Human Eye Poor Meter*

Like pH it is a scale for measuring and also like pH it is a scale based on logarithmic relationship. Here the analogy stops, since this scale measures the relationship which exists between the various tones in an illustration. It is, however, a means of obtaining facts and giving a numerical designation to values which every operator sees but ones which he frequently misinterprets through no fault of his own.

When a photographer puts his glass on a negative or positive, or when a pressman examines a press sheet, he is attempting to read the *density* of the silver image or the ink deposited in the various portions of the illustration. Each is relying on judgment acquired by years of experience in making these visual readings. At best the human eye is a poor meter for this purpose.

Numerous illustrations have been given showing the illusion created when a gray area is surrounded by a black one and then when the same gray area is surrounded by white. In the former case the gray appears to be almost white, while in the latter it seems to be a very dark gray; and to see either one separately no similarity could be noted. When halftone dots are viewed through a glass, exactly the same illusion is created. Fog on transparencies or a slight scum or wash on a plate could therefore cause a photographer or pressman to completely misinterpret the effect he was producing.

The measurement of optical density isn't new. Much of the progress which the motion picture industry has made during the past quarter of a century has been made possible through the use of densitometric measurements. Many photographers depend on these measurements for producing good prints. Over ten years ago attempts were made to introduce *densitometers* into both photoengraving and lithographing shops, but it remained for the masking methods of correcting Kodachromes and other color transparencies to actually create a demand for these instruments in most plants. Many shops which have these instruments use them only for this purpose and do not realize how helpful the densitometer can be for their plain black-and-white work.

Before going into the use of the densitometer and density measurements it might be well to think back to the fundamentals of black and white reproduction. Why do some things appear to be black and others white? An area which appears to be black permits no light to reach an observer's eye from it. An area which appears to be white permits all the light to reach the observer's eye. In the case of positive or negative transparencies this light comes through from the back of the film or glass and is thus blocked or permitted to pass through by the developed silver. Hence it is opacity which makes a transparent material black.

Between black and white there are innumerable shades of gray. These represent the actual amount of light which reaches the observer's eye. Thus under poor light a gray will appear black, and under intense light a black may appear gray. Since no photographic negative or positive or lithographic, letterpress, or gravure impression absorbs all the light imposed upon it (nor does a Velox or photographic print), it is the degree of "blackness" which is of interest in the reproduction of illustrations. Likewise since no film or glass is completely transparent (transmits all the light which shines on it) or no paper or other material on which prints are made reflects all the light which shines on it, whiteness, too, is relative. It is this relationship between the amount of light transmitted and that which is absorbed which is called optical density.

### *Describe Tone Relationships*

Densitometer measurements are based upon the proportion of the total amount of light used to illuminate the area and the amount of transmitted or reflected light. The density reading or figure is not this proportion but a figure derived from it mathematically.

Why isn't this simple relationship between the total amount of light and that transmitted or reflected used in designating optical density? It is not used because the human eye does not see and evaluate tone values on this basis. Simply because a certain area transmits or reflects half as much light as another area does not mean that the first area will appear twice as black. Density measurements attempt to describe tone relationships as they appear to the eye. If it were possible to find a piece of black plastic material which would absorb light uniformly depending on its thickness at the rate of one per cent for every one-fiftieth of an inch, a two-inch square bar of this material would transmit no light whatever, and therefore be "opaque."

If a wedge were made by cutting this bar diagonally from one end to

the other and light permitted to pass through this cut edge, various shades of gray to black would be visible from the opposite uncut edge. This shading off from gray to black would not be uniform. At the thinner half of the wedge the change would be very gradual while at the thicker half the change would become more rapid with many, many recognizable shades of gray crowding into the thickest part.

In order to cut a wedge which would appear to give a uniform gradation from white to black it would necessarily have to follow the curve shown in Figure 1. In this particular illustration (which intentionally ignores the effect of angles of incidence and refraction) the tones should shade off uniformly from white to almost black. If this bar of plastic is eight inches long, the cut should be one inch thick, or half the way through the thickness before it has progressed one and one-half inches down the length of the bar. This means that when the uncut edge of the bar is viewed with light shining through from the cut edge, half the light will be absorbed at this point whereas the bar which was cut diagonally would be cut halfway through at the midpoint or, with an eight-inch bar, at a point four inches from either end. This, too, would represent the absorption of half of the light. Thus it can be seen that tone values do not follow what is known as a "straight line" relationship. If one area absorbs twice as much light as another area it will not necessarily appear to be twice as dark.

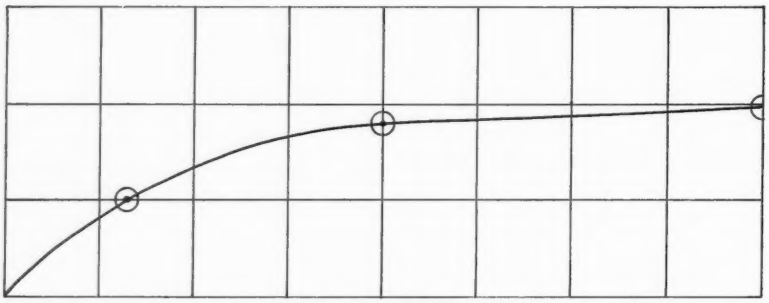


FIGURE 1

Actually this relationship, and the curve which represents it, is what is known as a "logarithmic" relationship. If the amount of light which falls on an object (measured in terms of the intensity of that light) is divided into the amount of light reflected from or transmitted by that object, the transmittance or reflectance of that object can thus be measured; and that ratio will be true for any light intensity. In making such measurements of transmitted light the source of the illumination is placed so that the rays strike the object at a right angle to the surface, and the reading is made directly above it. Reflectance is measured by causing the light to strike the object from an angle of 45° from the surface and the reading is made at an angle of 90° from the point on the surface where the light strikes.

The figures for transmission or reflectance could be used for expressing density but this would hardly be in keeping with the common description of one area or object being twice as dark or dense as another area, or other such common expressions. It would be confusing to think of an ink printing a solid with a reflectance of 12.59 per cent and a darker ink printing solids with a reflectance of 9.55 per cent. Likewise it would be difficult to consider developing a negative until it had a transmittance of 1.585 per cent, or a denser one to a transmittance of 1.259 per cent. Instead, the first ink can be considered to have a density of 0.90 and the darker one to have a density of 1.02, while the two negatives would have densities of 1.80 and 1.90.

For those interested in the mathematics of this conversion of transmittance or reflectance into terms of density, it is the logarithm of the reciprocal of the transmittance or reflectance. Since the reciprocal of a number is that number divided into one, an area which had a transmittance or reflectance of 10 per cent would have a reciprocal 1/.10 or 10. A logarithm (to the base 10) is the number of times 10 must be multiplied by itself in order to make the product the same as the original number. Thus if the reflectance or transmittance is 10 per cent the logarithm is 1. Likewise for 100 per cent the logarithm is 0, and for 1 per cent the logarithm is 2. Although the values in between can be calculated on the basis of the number of times 10 must be multiplied by itself, persons who are in the habit of using these figures generally refer to a table or slide rule.

In LTF Bulletin Number 4, *Optical Density as a Measure of Tone Values in Lithography,* a special table has been worked out which gives the corresponding per cent transmittance or reflectance for each density value. Since all densitometers give readings in terms of optical density, these readings may be easily translated into percentage reflectance or transmittance through the use of the table.

Density values are facts which tell the difference between a well printed job and a poorly printed one, no matter how it has been produced. The trouble is that all shops do not possess these instruments, and *all densitometers do not read reflection density.* Many only read transmission. Those which read both transmission and reflection densities find the widest application in a shop.

### *Measure By Gray Scales*

Simply because there is no mechanical device available does not mean that density should be ruled out as a means of measuring printed material. There are many continuous tone and halftone gray scales available, some of which give the density readings for each step. These may be used for rapid comparison of finished work. Most important of all, everyone who has any responsibility at all for passing on finished work should learn to think in terms of density. It explains the reason for so many things which happen in the reproduction of illustrations and it points out the direction to be followed in correcting troubles.

It has been explained that when light falls on a printed sheet a portion of that light is absorbed by the ink. For any area of solid ink coverage, approximately 10 per cent of the light is not absorbed but is reflected. When 10 per cent of the light is reflected from an area, that area is said to have a density of 1. At times solids run over this figure both in letterpress and in offset lithography but frequently they run as low as 0.85 to 0.90. Many things make this value vary: the pressure smoothness of the surface of the stock, ink absorption of the stock, amount of water carried in offset, quality of the ink, and the amount of ink carried.

Although a few customers may want a "soft" effect in their printed matter, most of them are looking for

something closely resembling that glossy print which they submitted as copy. When you consider that glossy prints normally have densities ranging from 0 to between 2 and 3, and the printer must attempt to reproduce all these tones within a density range between 0 and 1, the problem becomes apparent. This is the reason for many customers' complaints. (In reflection density readings the blank stock is usually considered as having a density of 0, since it reflects the maximum amount of light possible for consideration for that job.)

### *Optical Density of Print*

To further complicate this condensing of a long range of tones into a range of half the length or less, halftone dots (except in gravure) must be used in the reproduction. This means, for example, when the solid ink coverage has a density of 1.00 the solid portion of a half-dot will have approximately the same density and will absorb 90 per cent of the light and reflect 10 per cent. But the white portion of the paper will reflect 100 per cent of the light or have a density of 0. Therefore the area covered by half-dots will reflect 55 per cent of the light or have a density of only 0.27 or a little more than a quarter of the density of solid areas. It also means that almost three-fourths of the tones in the illustration must be reproduced by dots larger than a half-dot. Add to this the distortion of tones due to the ruled screen used for making halftone negatives or positives, and some of the reasons for poor quality reproductions become obvious. But the photoengraver uses a screen; and letterpress inks, which do not print with any greater density than offset inks, appear to give a more faithful reproduction in many cases. Why is this true?

This can be completely explained on the basis of optical density. First the photoengraver pulls a proof of his etched plate. By hand tooling and fine etching and successive proofs he spreads out his tones which are crowded together and then pulls a proof with no makeready which is supposed to show all the tones on the plate in their proper relationship to each other. It is contended by many people that the faster a letterpress operates, the smaller the amount of ink transferred from the form to the sheet (providing the ink is not specially formulated to compensate for the difference in speed of presses). Thus on a proof press which runs at a speed considerably less than a production press more ink is transferred and the density of the printed areas is greater than it will be on the final job.

What does the letterpress pressman do to compensate for this? He depends on makeready either put into his electrotype as premakeready or the hand or mechanical overlays or underlays. In some works where tone control in lithography has been compared with letterpress it has been stated that the squashed-out ink around the edge of the dots is responsible for the greater density of color in letterpress shadow toned. This may be true to some degree but "squeeze" itself would seem to be the more important factor.

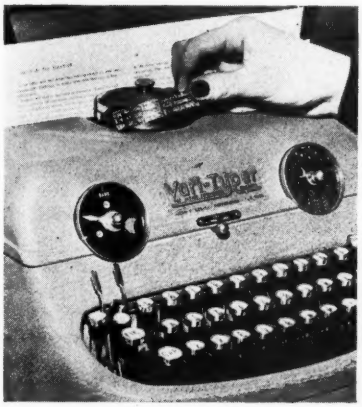
The density of solids printed by letterpress can be varied over a great range of values by increasing or decreasing printing pressure. Thus the tone range of a letterpress plate is increased by actually giving greater density to the dots in the shadow or near-solid areas by increasing the pressure in those areas through the use of makeready. By decreasing pressure in the highlight areas a less dense film of ink is transferred.

Since an offset pressman is merely expected to slap a plate on the press, position the print on the sheet, and start running, how can he produce work comparable to letterpress? There is good letterpress printing and there is poor. The same applies to the lithographic process. As has been stated many times in these columns, offset lithography can be made to equal any work produced in regular commercial shops by letterpress (with the exception of a few specialty or novel effects such as printing gold ink).

The difference in the quality of offset printing depends on the tone values in the plate, the roughness or smoothness of the surface of the stock, the intensity with which the ink will print, roller setting, packing between the plate and the blanket, the pressure between the back cylinder (impression cylinder) and the blanket, the amount of ink carried on the press, the amount of water carried on the plate, the effectiveness

## "Differential" Spacing of Characters Featured in New Vari-Typer Machine

RALPH C. COXHEAD CORPORATION, New York City, has introduced a new model of its Vari-Typer—the office composing machine which produces justified lines of typewritten copy for photo-mechanical reproduction. Called the "D.S.J." (differential spacing justifier) Vari-Typer, the new machine has differentially spaced characters, with more space being allowed for a "w" than for an "i" for example. In addition to this feature, the new Vari-Typer justifies the length of lines by adding space between words instead of between letters, with the result that the copy produced more closely resembles printer's type than does that typed on the old model. Headings can be centered automatically. Interchangeable gears permit any desired "leading" between the lines of copy.




**Close-up of the new "D.S.J." Vari-Typer showing "font" of type which can be changed as simply as can be changed the blade in a safety razor**

### *"Fonts" of Type Easily Changed*

As may be seen in the accompanying illustration, the "fonts" of type are engraved on semi-circular pieces of metal. Changing type faces is as easy as changing the blade in a safety razor. In addition to the more than 600 fonts of type available (many of them for foreign language composition), four new faces resembling traditional printer's types have recently been cut—called Garamond, Tribune News, Bodoni Book, and Lithobook. A fifth type for setting agate lines in classified advertising is now being designed.

According to the manufacturer of the Vari-Typer, the production rate of the new model machine is twice that of the average metal type line-composing machine.

of desensitizing agents, and the use of the makeready under the blanket. These and other factors which affect printing quality will be discussed in terms of effect on optical density in this and future articles.

Perhaps the last factor listed, the use of a makeready under the blanket, may be startling to some, but it has been the practice in some shops and is occasionally followed in a good many shops. This is contrary to the generally accepted idea that all that is needed for good offset is a kiss impression. Ordinarily a pressman is instructed to roll the plate up solid and if the blanket is in good condition and the plate and blanket are packed correctly (a thousandth or two above bearer height gives a slight squeeze between the plate and blanket), a solid print is transferred to the blanket. Then the back cylinder is brought up until there is just enough pressure to transfer a solid print to it.

Any adjustment for thickness of stock is made by backing the impression cylinder away from the blanket cylinder. This method is used to *insure* uniform pressure and make possible building up the low spots in the plate and blanket (and impression cylinder, if necessary). It should then be possible to transfer a uniformly solid print to the sheet of paper, and the press is considered to be made ready for any job. All that remains is to wash out the plate and position the print on the sheet.

This uniform all-over density can be increased considerably by creating more pressure between the blanket and impression cylinders, but during printing it will cause the blanket to creep, cause doubles, make slurs, wear the plate, and result in a horrible looking job, if the pressure is increased too much. The density of solid or near solid areas can be increased by this method, but at the sacrifice of good printing in middle and highlight tone areas.

When it is necessary to print very dense solids and still not increase the density of halftone areas, one or two tissues are pasted to the packing under the blanket in the same manner as a makeready is placed beneath the stretch sheet on a letterpress. Sometimes very elaborate makereadies closely resembling letterpress ones are used. It is not possible to spot them quite as accurately under the blanket, and there is more tendency for them to shift as the stretch in the blanket is taken up during running. This is a means of lengthening the range of densities. Since the pressure is not over the entire area of the blanket, creeping troubles are negligible.

Elaborate makereadies should not be necessary in offset lithography, but occasionally they can be used to change an otherwise mediocre job into one of outstanding quality. As long as all printing areas have equal density, whether they be pin-point dots or large solid areas, dot size is the only means of reproducing various tones. How offset can do this through densitometry will be shown in future articles.

**Cecil H. Wrightson, Inc., Boston, demonstrates what can be done to turn government post cards into effective advertising. Printed in two colors**

# A Three-Star Second Color

**By Glenn J. Church**

★ *Serves well as a background for proper body type*

★ *Very effective for large display type in "reverse"*

★ *Suitable for display type and bold illustrations*

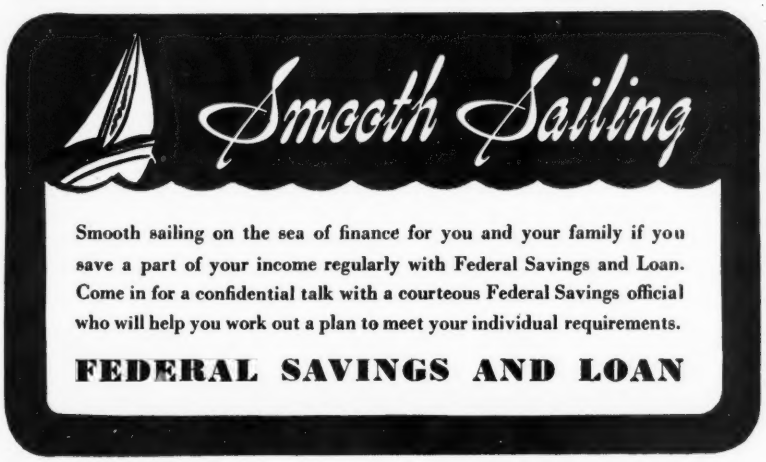
Some second colors are excellent for a few specific purposes, but their proper use is extremely limited. Here's one that fills a variety of needs—an interesting, pleasing hue of bluish-green which has good visibility and good legibility through a wide range of applications.

With reasonable care in the selection of the style and size of type, body type in black is entirely legible on a solid background of this second color.

Display type in "reverse" is unusually effective against a background of this hue. Illustrations in black, with highlights in white, are striking against a ground of this second color. Cut-out panels permit the use of any style or size of body type.

Bold display type, heavy poster-style illustrations, rules, ornaments, *et cetera,* may be safely printed in this hue. Unless black is required for some particular purpose, deep brown, deep blue, or purple serve very well as the "heavy" color instead of black.

Nor do the examples shown here exhaust the possibilities. Outline display type in black, with the body of the letters cut out of the background, produces a striking effect. So does cutting the type out of the background, then over-printing the original type in black slightly out of register. Ben Day tints of this color add still more variety to the possible effects.


Smooth Sailing
Smooth sailing on the sea of finance for you and your family if you save a part of your income regularly with Federal Savings and Loan. Come in for a confidential talk with a courteous Federal Savings official who will help you work out a plan to meet your individual requirements.
FEDERAL SAVINGS AND LOAN

**ABOVE: Proper choice of body type style and size insures acceptable legibility on a background of this versatile second color. Display type and decoration are fully comprehensible. Highlighting the insignia by cutting out the green plate would be an interesting variation**

**LEFT: Large display type in reverse is particularly striking against a background of this second color. Cutting out the green plate behind all or part of the illustration makes the paper a part of the picture. Cut-out panels permit the safe use of any style or size of body type**

**BELOW: Bold display type, heavy poster-style illustrations, rules, ornaments, et cetera, may be safely printed in this second color. Black need not be the "heavy" color; visualize the interesting combination of this pleasing second color with a deep brown, deep blue, or purple**

NEWS!
Read the news while it is news—in the just-off-the-wire-news pages of THE DAILY BLADE. AP, UP, and INS news services insure complete coverage of all important events.
THE DAILY BLADE

# MR. PRINTER—MR. LITHOGRAPHER:

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## *HOW TO GIVE!*

**1. Make check payable to CARE for $10 or any multiple thereof.**

**2. Attach your letterhead or business card.**

**3. Send to Printers' and Lithographers' International Relief Committee, P.O. Box 1422, Cincinnati, Ohio.**

If you and your family lived in Austria, France, Italy or any of the 15 countries served by CARE, you'd be mighty grateful for a helping hand from Printers and Lithographers of America—WOULDN'T YOU?

---

"The Printers' and Lithographers' International Relief Committee" has just been organized.

Working through CARE, it will aid needy printers and lithographers in 15 European nations caught in the war's aftermath.

EVERY PENNY of your gift reaches your beneficiaries. This committee serves without pay and finances its own work. CARE likewise contributes the handling and distribution of gifts. It is a government-recognized European relief agency.

Your gifts can mean the difference between life and death for printers and lithographers in some parts of Europe. We know you'll want to help.

Gifts of $10 or multiples thereof are acknowledged by CARE. Your gifts are deductible from federal income tax. Personal aid is needed abroad in addition to Marshall Plan help.

★ ★ ★

## THE PRINTERS' AND LITHOGRAPHERS' INTERNATIONAL RELIEF COMMITTEE

**P. O. Box 1422—Cincinnati, Ohio**

**Mr. Lee Augustine, Chairman**

# THE PRESSROOM

BY EUGENE ST. JOHN

Questions on pressroom problems will also be answered by mail if accompanied by a stamped envelope. Answers will be kept confidential if you so desire and declare

### SPOT CARBON WORK

We have been doing some spot carbon work like the sample enclosed but have been unable to secure the best results. Will you advise us as to the best method of doing this class of work?

This work is turned out both hot and cold. The best jobs by the cold process are good for months if the user will co-operate by keeping the sheets where they will not be exposed to dry heat and low relative humidity, which dries out the ink so that it will no longer yield a good copy. It is hard to get this co-operation. The best way is to order not more than three months' supply.

Both hot and cold carbonizing may be obtained by the trade from specialists. Rotary equipment for hot carbonizing is on the market.

The printer who undertakes this work (cold) must find the best ink and use an ample supply without smearing. The inking must be uniform throughout the run for which purpose agitators in the fountain are a "must." The ink must be suited to the kind of paper used, safety, bond, ledger, and so on. Since any guarantee depends so much on what happens after the job leaves the printing plant this work may be very hazardous. Many printers, rather than risk losing a good customer for other work, turn this work over to specialists.

### LUMINOUS SIGNS

On page 41 of the May issue, you have an article on luminous signs. Would you be so kind as to let me know from what sources these are available?

As we do not know the sources of supply in your country we are referring you to the manufacturers and suppliers of the pigments and activators used by painters and printers of luminous phosphorescent pieces. Basic materials used are exceptionally pure chemical compounds, manufactured under exactly controlled conditions: zinc sulfides, combinations of zinc and cadmium sulfides, and calcium and strontium sulfides, depending on which metal is predominant in each compound.

In the manufacture of these pigments, an exceedingly small amount of some other metal, such as copper, bismuth, silver, or manganese, is mixed with these pure compounds. The reason for including this metal is that none of these pure compounds will have brilliant luminescence by itself but when a little activating metal is added a new compound can be made which glows very colorfully.

### SNAP-OUT CARBON FORMS

Please put us in touch with or give us the name of a manufacturer of snap-out carbon forms.

This great division of the printing industry is highly specialized. Printers who have calls for this work in volume can best obtain it from the prime suppliers who have developed the most efficient methods of production via letterpress, offset-lithography, and aniline process. Snap-out, zigzag, continuous forms, and so on are sub-divisions of the great field of multiple billing.

Some good advice offered in the interesting pages of "Prints of Paris"—house magazine published monthly by the Paris Printing Company, Kansas City, Missouri

### FROM DUBLIN

Our largest item is label printing. While our methods of production are quite satisfactory we are always on the lookout for up-to-date equipment which will produce a better label in less time. We should feel obliged therefore if you could give us any information concerning label production in multicolor with imprints, punched complete and ready for packing.

In the United States all the major printing processes are used in label printing. Speedy two-color flatbed presses in letterpress, and rotary machines of various kinds, aniline, letterpress, offset-lith and rotogravure, are utilized, some printing up to seven colors in one operation, others printing a number of colors and varnishing, others printing in colors and die-cutting in one operation and so on. Gloss inks are used to avoid varnishing.

The latest die-cutting machines have great capacity, millions of labels per day. The layout in all processes is made to suit requirements of the die-cutting machine.

The multiplication of the original image is by photo-composing machines (step-and-repeat). The choice of equipment depends largely on the end use of the label, the quality and quantity wanted, and the cost limit.

Direct printing and silk screening upon objects so that they may be re-used without re-labeling is also employed.

### EMBOSSING WITHOUT FEMALE DIE

Our superintendent has made a request for a small embossing job. He wants name and address in copperplate type embossed on an envelope blind, without colored ink. I recall a makeshift method which I used years ago. We locked the type form in the chase, inked it with heavy bond ink, set the gauges, and made the job ready, then pulled a half-dozen impressions, using onionskin paper. These impressions were dusted with compound and heated to fuse the powder and ink. Then the impressions were glued on the platen in register with the impression on the tympan. Next a

piece of high-grade blotting paper was glued on a type-high stereotype plate and locked in the chase after the type form had been removed. All that remained to be done was to run the press on impression until the female die was formed in the blotting paper on the stereotype cut and then proceed to feed the envelopes to the gauges, thus embossing the letters. My question is: Isn't there a simpler way to do this work? If so, what materials are used and where may they be procured?

As you doubtless know, the thermographic type of embossing (often called raised letter printing) and imitation embossing may be done in black and in colors either to yield a glossy or a dull or mat effect. The same applies to white. A gloriously glossy or a dull white, approximating blind embossing, may be produced with thermographic supplies. You buy special white and powder from the supplier, print, dust, and toast and get the crest simulating blind-embossing.

### SMALL ROLL-FEED ROTARY

We are interested in purchasing a small printing press suitable for running stock from a roll up to ten inches wide. Could you advise us of a possible source and also if any machines are available in the immediate future? We have been in contact with one supplier and all they will have until 1949 is a six-inch width. The machine we require is for short runs to fill in the odd lines of our customer.

Small roll-feed rotary presses are made which print regular letterpress from metal and rubber forms, aniline process from rubber, by offset-lithography, and by rotogravure. By consulting the manufacturer you may learn probable date of delivery. Some suppliers are now sending out probable date of supply of the various items which they manufacture.

### SHOW-THROUGH IN THIN PAPERS

Will you indicate the way to proceed to prevent show-through when printing on thin paper? In other words, how can we cope with the transparency of the sheet? Can one use a special ink to advantage?

There is no satisfactory solution of this problem and a more opaque sheet should be used, if possible.

The show-through may be kept at the minimum possible by using just enough squeeze to print and an 11-point bakelite drawsheet and a gray or grayish black ink like four-color process halftone black. Gray ink is better and ought to be mixed by adding to transparent white ink a very little transparent black obtained by mixing transparent yellow, red, and blue process inks.

### SUPER HEAVY COATING

Attached is a sample of the best C1S proofing paper, a stock used in our drafting department for many years in making and correcting map drawings. Its manufacture was abandoned several years ago. The only other comparable paper we have ever used has also been discontinued. We are desperately in need of a stock of this nature. Because of its specialized use many printing papers, while serving splendidly in production runs, still do not answer our needs. They may have wonderful printing surfaces and be of a similar weight but still lack the extra heavy coating of clay or enamel you will find on the sample. We use this paper in proving up map key plates when we wish to make revisions. The unwanted names, boundaries, rivers, and so on, are scraped off in the spots to be corrected, using an engraver's knife. The new names are hand-stamped in the clean, smoothly scraped areas, using foundry type in a pallet. In case of a river or boundary, the new delineation is applied by hand with a fine pen or brush. This paper stands a lot of scraping on account of its heavy thickness of enamel. What we need is a paper with a coating of clay or enamel equivalent to the sample and of about the same weight. We admit we have made much effort to locate a material like this in the past year.

We are sending you a complete list of mills coating high grade papers in the hope that, while the very best proofing paper is no longer made, there may be some special paper suited to your purpose.

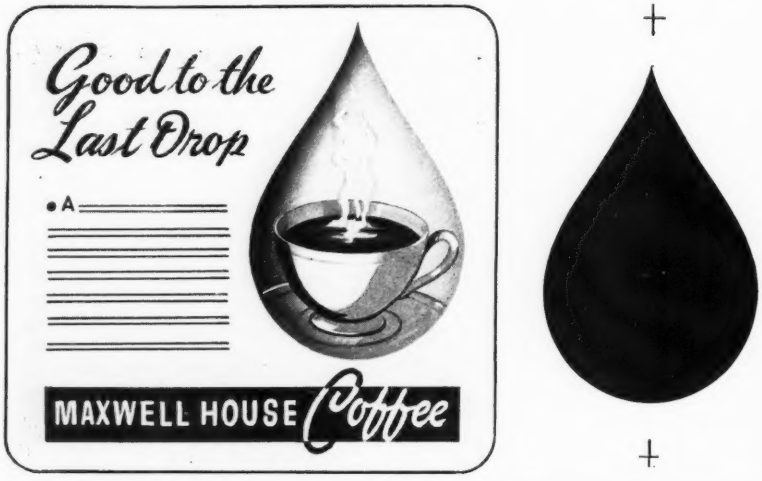
## Shortcuts to Savings on Photoengravings

*Number 4 of a series of brief articles on how to economize on printing plate costs.*

Unusual-shaped halftones are interesting and attention-compelling. They can turn commonplace subjects into highly effective illustrations for printing and advertising pieces. And their cost need not be excessive if this procedure is followed:

In the accompanying layout, the theme of the advertisement has been dramatized with a halftone of the subject in the shape of "that last drop." To produce an unusual-shaped halftone such as this, first draw with black India ink on white paper a solid area identical with that which the finished halftone is to be. Put register marks above and below to establish a vertical direction. Then, on a tissue flap laid over the picture, indicate (with soft pencil so as not to damage the print) approximately the area of the picture which is to be used.

Supplied with the foregoing material, the photoengraver then simply makes a line negative of the pen and ink drawing, a halftone negative of the picture, and, with a minimum of time-consuming and costly hand work, lays the line negative guide over the halftone negative and proceeds easily and quickly with the manufacture of the halftone plate.




**Layout indicates unusual-shaped halftone dramatizing theme of advertisement. To economically produce this halftone, make India ink drawing of shape identical with that of desired halftone. On tissue flap over picture, indicate approximate area to be used. This saves hand work by engraver**

### GLUING FORMS

We are attempting to line ourselves up to do some of the specialty work connected with fastening one-time carbon to statement forms to be used with business machines. We are most interested in snap-out forms.

While snap-out presses, collating and gluing machines are on the market, the broad division of multiple billing is highly specialized. Production competitive upon a large scale requires costly special equipment.

### SILK SCREEN EQUIPMENT

Being interested in silk screen process, we wonder if you can tell us who makes automatic or semi-automatic equipment for this process and especially for silk screening on curved surfaces.

Such equipment is on the market and not only for use on rounded objects but even for paperless labeling direct on glass. The list of makers is being sent to you.

### ROUNDER AND BACKER

Who makes a rounder and backer machine and just what is its scope?

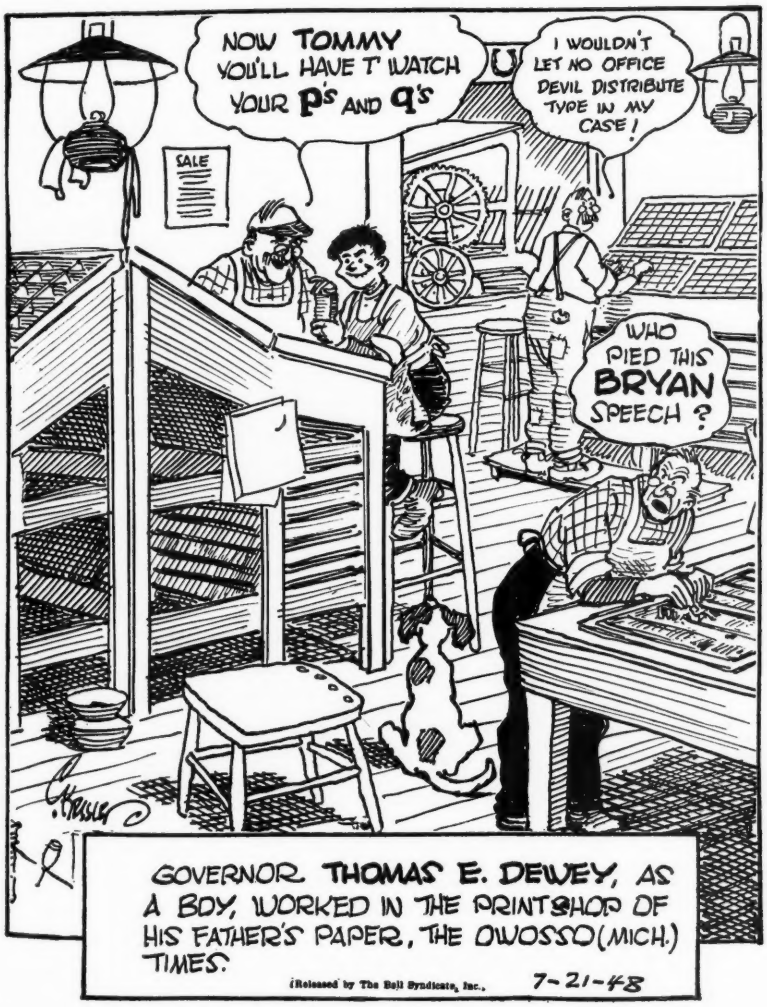
It is an automatic bookbinding machine of high efficiency which forms, bends, feeds, makes and smooths book pages (covers). It is sometimes called a case-making machine. One may be seen in large bookbinderies.

### INK PUMP

Where can I get a pump (hand operated) to pump ink out of a 55-gallon drum into printing presses? Ink used is for printing newspapers. Extension from pump to trough in presses (metal preferred) can use rubber hose if no other type is available. Extension should have stop-off at far end.

While there are a number of concerns making pumps for ink and other fluids you will profit by consulting the makers of your presses for reliable information on pumps for use on these particular presses.

### HOME TOWN ECHOES • BY C. KESSLER


NOW TOMMY YOU'LL HAVE T' WATCH YOUR P's AND Q's
I WOULDN'T LET NO OFFICE DEVIL DISTRIBUTE TYPE IN MY CASE!
SALE
WHO PIED THIS BRYAN SPEECH ?
GOVERNOR THOMAS E. DEWEY, AS A BOY, WORKED IN THE PRINTSHOP OF HIS FATHER'S PAPER, THE OWOSSO (MICH.) TIMES.
(Released by The Bell Syndicate, Inc.
7-21-48

### DIE CUTTING

We are quite anxious to know if it is common practice in print shops to use an automatic feeder when die cutting paper stock on a platen press. We have a new automatic on the floor still in a crate and before setting it up we'd like to know if die cutting paper by automatic feed is practicable.

The automatic feeding is practicable on an automatic press which both prints and die cuts by using rubber press ejectors in and around the dies. For some kinds of work most press manufacturers recommend their cutting and creasing model, which leads us to suggest that you consult the manufacturers, giving them complete details of the die cutting you have in view.

### STAMPS FOR "DRIVES"

Would you please inform us where we could get approximately 100,000 stamps printed in one color or two colors, similar in size to the Tuberculosis Drive stamp? This information would be appreciated.

The production of printed and lithographed stamps, ration, trading, "drive," and so on requires special equipment for economical production in quantity. It is a division of label printing. Involved are exact layout, economical reproduction of the original, and so on, as well as cooperation by the maker of gummed paper.

### McKEE PREMAKEREADY

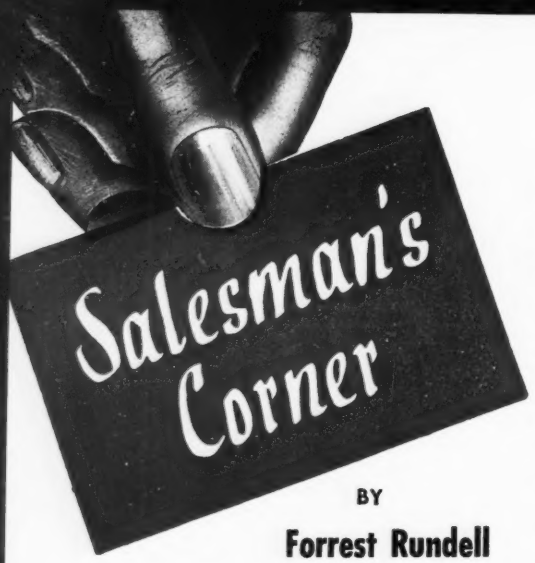
We have just purchased a modern rotary press and as a result have become interested in the McKee process of premakeready. We understand the principle of this process somewhat but are particularly interested in knowing if it is being widely used and how satisfactory it is.

The Curtis Publishing Company, which has produced *Ladies' Home Journal* and the *Saturday Evening Post* by this process for many years, pioneered in its use and the results obtained in these publications speak for themselves. The process is admirably efficient for long runs.

### LUMINOUS SIGNS AGAIN

We'd appreciate any information you can give us in regard to the manufacture of luminous signs. Where can the phosphorescent materials be purchased? Of what are they compounded and how are they manufactured?

Depending on how it is to be used, the luminous paint or ink is a special order for a paint factory or an inkmaker. In the graphic arts luminous signs are produced via letterpress, offset-lithography, and the silk screen process.




BY

**Forrest Rundell**

● HERE'S another sidelight on buyer character which may help some of our junior salesmen who wonder what causes the illogical behavior of some buyers they meet.

A purchasing agent recently said to the writer, "I hate to say this, but it seems to me that anyone in the graphic arts who tries to be a gentleman gets the worst of it." Coming from a buyer of long experience this was something of a jolt. Try as he would, the writer found himself unable to think of a quick comeback. And as the buyer amplified his complaint he made his case so much stronger that we decided then and there to take his proposition apart to see what there was in it.

To begin with, we consulted a good friend who has been a printer for many years—long enough to acquire a philosophical view of his problems. We repeated the buyer's remark and asked for an opinion as to its merit. Our friend's reaction was first to get a bit red in the face. Then he laughed. "And the worst of it is," he said, "that your friend comes pretty near to being exactly right. You know the old saying 'The axle that squeaks the loudest gets the grease?' Your friend has probably been stung so many times by printers who failed to keep their promises that he has found the only way he can protect himself is by getting tough."

This is a problem the junior salesman finds himself wrestling with almost from the first. Say he plugs an account until he finds the buyer becoming friendly. Then he gets an order. He may have been low bidder or his bid may have been low enough to let the buyer forget the difference and give him an order. Copy, plates, and order are handed over and every thing seems rosy. Then comes the buyer's question, "When will I get the job?"

At this point, the salesman, if he is wise, will wait until the shop has had the opportunity to examine all the material before he makes a delivery promise. If he is *very* wise he will then go to the person in his shop who has the authority to make promises stick. He will ask for a written memo to the effect that the job is promised for delivery at a certain date. Then, and not until then, will he pass a promise on to his customer.

But the salesman will learn that he cannot let the matter drop here. The shop has other jobs on hand and some of them have been handed out by purchasing agents who believe in being tough. His own promise may have been made in good faith but what about this other purchasing agent who wants his order at the same time and who is yelling like a wild man?

If that fellow is a regular buyer with considerable business he may scare the shop into fits. In fact he may scare the shop so badly that the shop will put his work ahead of the junior salesman's order until its promised delivery date has become an impossibility.

Generally it works out this way: The shop will allow itself some extra time when it makes the original promise. Then when the emergency arises it will figure that there is enough extra time left to put another job ahead of the junior salesman's promised work and still come out even. And if anything goes wrong—well—the shop is sorry.

The trouble is that when a shop gets in a jam for a time, that is the very moment at which things seem most likely to go wrong. And if the purchasing agent takes this particular time to decide that he is getting nowhere by being a gentleman he may shake up the shop still further by being very nasty indeed.

Another way a shop can stir up the wrath of the purchasing agent is this: The shop may make a promise based on the premise that the presses are full at the moment but that it will have time beginning two weeks hence. The shop will enter the order but instead of checking the plates and all material at once, will wait until almost the moment when the job is scheduled to go to press. Then, when the shop starts to make up the forms it discovers that it is shy something. Maybe it is a set of progressive proofs. Maybe the shop has the wrong plate for one of the pages.

Naturally the buyer wants to know what the shop has been doing all this time if it has just waked up to the fact that it hasn't the whole job. And he is likely to explain with emphasis that his work is just as important to him as any in the shop and if the salesman isn't ready to treat it that way he had better not come around for any more orders. Of course the suggestion here is that the salesman protect himself by insisting that everything for the job be checked in at the beginning.

But the real answer for the salesman who does not want his ears pinned back by an irate purchasing agent is to do a real selling job in his shop. He needs persuasion with the shop itself just as he needed it with the buyer who gave him the order. The average shop man knows little about the problems of the sales department. Even the partner who runs the shop and has himself been a target for some of the best cussings his customers have been able to hand out often does not have the proper slant on a customer's needs.

The average salesman is only a cog in the machine and generally is not in a position to get tough enough to make the shop stick to its promises. His only recourse lies in selling his needs to the shop just as he sells the services of his shop to the customer. Of course he can help by following the daily progress of his orders and howling whenever a delay appears. But his best bet is influencing the shop so that everyone concerned is interested in seeing that his job gets out on time.

If the shop makes good on its promises very few buyers will yell. Shrewd buyers know that if they are too demanding they will have trouble getting good printers to work for them. But, worse luck, they also know that with a lot of printers the only way they can get service is to yell for it.

## Binding Booklets

"If you wanted a booklet to lie open for reading, what bindings would you use?" asked our June Quiz. "Side-wire or spiral," said the answer.

D. Hoolsema, superintendent of printing at The James Bayne Company, Grand Rapids, comments on the matter.

"Of course, all of us old printers know that this is an error and should be saddle-wire, but for a lot of newcomers in the business the quiz may be misleading."

Our thanks to Mr. Hoolsema, who has celebrated his golden anniversary as a reader of IP.

However, nothing contained herein should be construed as advocating toughness as a policy for the salesman. It is true that the friend quoted earlier in the article referred to a very successful printer by saying "He was no gentleman in his shop but he certainly got results." But for a salesman the trait of character that will take him the furthest is personal charm.

Study the life of our Patron Saint Benjamin Franklin to see how a man can be a gentleman and be successful. We remember a paper salesman who got fed up with a buyer who seemed to take a particular delight in being tough. Said the salesman after one particularly vitriolic outburst, "Mr. X.: I got along very well during the years before I met you and I think I can get along just as well if I don't come around here again. Goodbye." "Hold on. Don't go away mad," said the customer. "We speak the same language." And from that time on the two were good friends.

Be a gentleman; fulfill your obligations; but don't make a doormat out of yourself.

# POOR POSTURE AT WORK CAN CAUSE ILL HEALTH

HAVING recently paid several hundred dollars for doctor and hospital bills, I am keenly aware of the importance to printers of an element which has been largely neglected by the industry, the posture of employes while at work.

Look around in any printing plant today and observe the number of hollow-chested, stoop-shouldered individuals who set type by hand. Watch their actions as they stoop to get a case from the rack or lean over a flat imposing stone or turtle. Then check back with your doctor or physical culture director and see what he says about the impossibility of getting sufficient air in the lungs to maintain health when the chest is compressed as it necessarily must be during these operations.

A doctor tells me it is quite common for these acts of wrong posture to cause, after a period of years, congestion of the lungs, curvature of the spine, atrophy and tuberculosis. Even before these specific disturbances make themselves known, the workman is far from healthy and efficient, and he may lower the production rate, due to ill health caused by poor posture.

In the days when I first learned to set type, the frames were breast high and the cases we set from were on top of the frame—the lower case below and the cap and small cap above. The stance here was a healthy one, giving free movement to the arms, keeping the body erect and making possible full breathing.

Perhaps equipment designers for the past few decades have been too concerned about the conserving of space. Of far greater importance is the conserving of health. Too much leaning over is necessary where cases frequently used reach to the floor. Frames with as many as 100 cases often result in lost time by congestion of several compositors at one frame, each after a different case. The ease and comfort of the person setting type, together with his necessary posture while working, should be given the consideration they deserve.

In the weaving industry, where the effects of poor posture were noted in similar cases of chest disease, equipment designers solved the problem by designing stools with short legs in front, so that the bodies of the operatives were no longer cramped at their occupation. This simple innovation resulted in a marked improvement in their health.

Much poor posture can be avoided by the compositor himself. Stooping over, which cramps the chest, can be avoided by going down with knees bent rather than bending the body. Cases near the bottom can best be reached from a stool or a sitting posture. All cases below a convenient height can be moved up until they can be reached more easily. Conscious thought of not caving in the chest while at work will be helpful. Many of the destructive cramping postures are the result of thoughtless action. A little study on the need for full deep breathing to maintain excellent health, and a man will avoid many of the things which he frequently does thoughtlessly which subsequently weaken his chest.

Statistics compiled by the army during the war showed a deplorable lack of good, sound health. Much of it was corrected by the simple expedient of good exercise and proper breathing. Lack of sound physique

## *Bassette Calendar Blotters Based On Interesting Historical Theme*

★ F. A. Bassette Company, Springfield, Massachusetts, printers, produced an attractive series of advertising blotters using as the theme some historical highlights of New England craftsmanship.

Typography is simple but neat. The artwork is authentic and well handled. Printed on white stock, each blotter is in black on a colored background—each of the twelve being printed in a different second color. The illustration technique makes the white stock an important and effective part of the picture. Advertising such as this is an excellent yet economical form of promotion for printers.

often was discovered to be the result of occupational posture.

That the printing industry is afflicted with a large percentage of chest and abdominal ailments is demonstrated by records of the Printers' Home in Colorado. Many of these diseases could be avoided by proper posture. A great deal is being said nowadays about health insurance plans of various sorts. It is even of greater importance to form habits which maintain good health than to get relief after health has been wrecked

The bugaboo of low production which haunts many plants is frequently the result of poor health. Lay-offs from work through sickness often occur at inconvenient times. Some of this difficulty can be corrected by effort to correct poor posture. A little education can accomplish a great deal. Consult your doctor or a teacher of gymnastics and he will be able to give you a few simple rules to pass on to employes. Production should increase.

Efforts in the past toward making conditions better for the employe usually resulted in increased profit. A well-lighted, air-conditioned plant produces more than one with poor equipment in this respect. A plant where proper posture is a matter that is given proper attention will also pay its dividends in better and more accurate work.

★ ★

### Henry Ford on Education

AN EDUCATED man is not one whose memory is trained to carry a few dates in history—he is one who can accomplish things. A man who cannot think is not an educated man, however many college degrees he may have acquired. Thinking is the hardest work anyone can do—which is probably the reason why we have so few thinkers. There are two extremes to be avoided; one is the attitude of contempt toward education, the other is the tragic snobbery of assuming that marching through an educational system is a sure cure for ignorance and mediocrity. You cannot learn in any school what the world is going to do next year, but you can learn some of the things which the world has tried to do in former years, and where it failed and where it succeeded. If education consisted in warning the young student away from some of the false theories on which men have tried to build, so that he may be saved the loss of time in finding out by bitter experience its good would be unquestioned.—*Henry Ford*

## COST-OF-LIVING BONUS FIGHTS LABOR UNREST

● EMPLOYERS preoccupied with employe grumbling and labor unrest might seriously consider the possibility of inaugurating a cost-of-living bonus for their workers. Even where the possibility of a strike is remote, an unorganized slow-down can be extremely costly, though not immediately visible to management.

One small employer has already instituted a cost-of-living bonus in open recognition that his employes' fixed salaries are not always in line with fluctuating costs of consumer goods which the employes must buy with their pay checks.

This employer has worked out a bonus, based on the Cost-of-Living Index released by the Federal Reserve Bank, compiled by the Bureau of Labor Statistics. As the cost of living goes up, so does the bonus.

Not a few employers at present confronted with demands for wage increases have been opposing such increases, even while privately admitting the merit of the demands in the light of living costs. Their seemingly paradoxical position has been prompted by the fear that once increases are granted they will remain in effect long after the conditions which warrant such increases have disappeared, and employers' ability to pay has been reduced. The cost-of-living bonus composes this fundamental conflict, in that it is in addition to a fixed wage, and is responsive to the cost of living.

Here is how the bonus works: The base period selected by this employer has a Cost-of-Living Index of 133.44. The period selected was four months prior to the date the plan was put into effect. When the first bonus month figures were obtained, it was found the Index stood at 143.6, an increase of 10.16 points or, percentage-wise, a rise of 8.4 over the base period.

Therefore, an employe receiving, say, $150 a month would receive for that month a bonus of 8.4 percent of $150 or $12.60.

The employer plans to continue to pay a cost-of-living bonus indefinitely, terminating it only when the Index drops down to or below the base period being used.

Aside from laying low one of the principal causes for present-day employe dissatisfaction, employers should remember that, with the tax considerations in mind, the net cost of such a bonus plan will be materially less than the dollar increase in wages would make it appear to be on its face. Long after the plan is terminated its beneficial effect may be felt and it well may be the basis for better understanding between employers and employes when, at a future date, the former feel the pinch of diminishing profits.

## TINY BOOKS PRESENTED TO COLLEGE LIBRARY

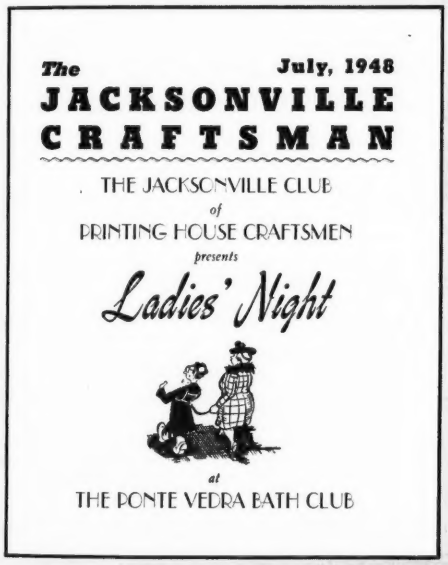
Four of the world's smallest books have been presented to Hobart College, at Geneva, New York, by C. V. Cole. Seven-eighths of an inch high by five-eighths of an inch wide, the books are bound in leather and are gilt-edged. Each page is a type page by itself. The two volumes shown against a ruler are "Extracts from the Autobiography of Calvin Coolidge" and "Washington's Farewell Address." Two copies of the autobiography were given; fourth volume is "Addresses of Abraham Lincoln"

# TYPOGRAPHIC CLINIC

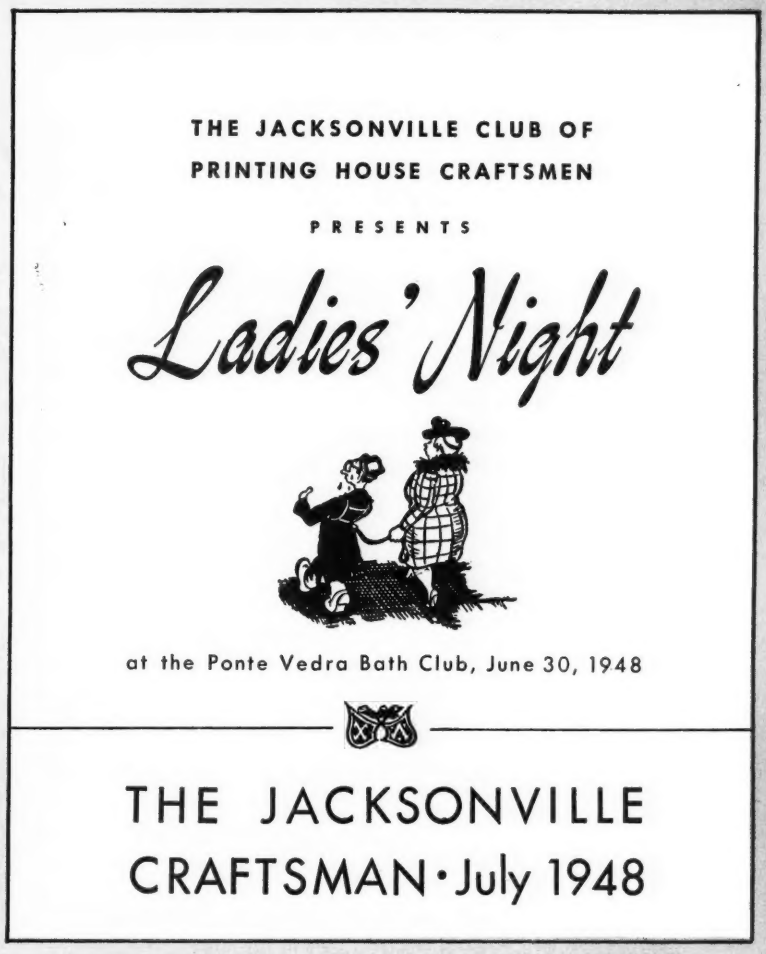
BY GLENN J. CHURCH

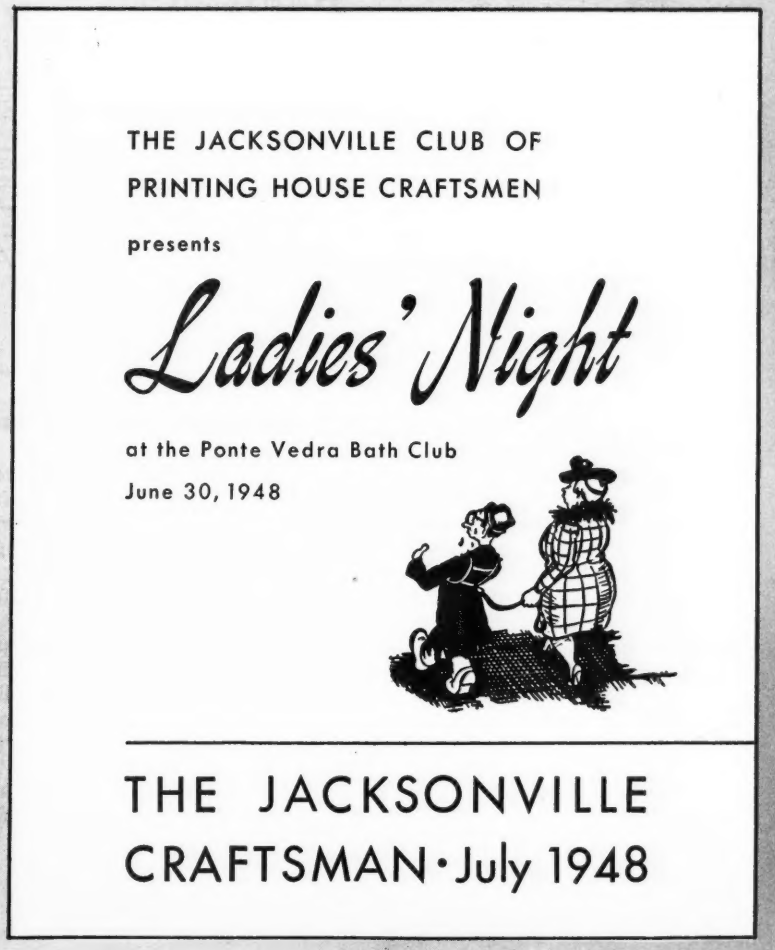
★ A conglomeration of four not-too-well-related type faces gets the original cover design (reproduced below in miniature) off to a bad start. Crowding of lines in the top portion of the page, with white space relegated to the area below, results in an unpleasant effect and gives the arrangement a feeling of top heaviness. Emphasis has been placed on the title of the bulletin, through style and weight of type and top-of-page position, instead of the title being made secondary to the major element--presentation of "Ladies' Night."

The two suggested re-settings demonstrate how the cover might have been designed using formal balance (right, above) which was employed in the original cover, and informal balance. Typography has been confined to two appropriate type styles. White space has been more effectively distributed. The clever cartoon appearing in the original has been reduced a bit to avoid crowding.




**Reproduced above in miniature is original cover design. At right, above, is suggested re-setting using formal balance which was used in original design. At right, below, is an interesting variation employing informal balance**



# Typical Fluorescent Lighting Sy

**By Walter S. Greenwood**

● HOW WOULD you like to have good seeing conditions in your printing plant? All you have to do is to give this lighting layout to your electrical contractor and ask him to estimate how much a similar system would cost. When he installs the units all he has to do is to place each lighting unit in the same relative position and at the right mounting height for each of the machines.

Of course you don't have to relight your whole plant at one time. Here are a few of the more difficult seeing tasks that may be considered first:

One of the more difficult seeing tasks in a composing room is found on the imposing table and on the top of the type cases. Here we are concerned with shiny surfaces of the type in the form and in the galleys. Where do you put your shiny car when you want to polish it? Chances are, you'll put it on the shady side of the house where you'll have the maximum exposure to the sky without direct sunlight. We need a large area lighting unit with diffusing glass covers for our imposing table and type cases. The larger the size of the unit, the larger will be the reflected image within which the type may be most easily seen.

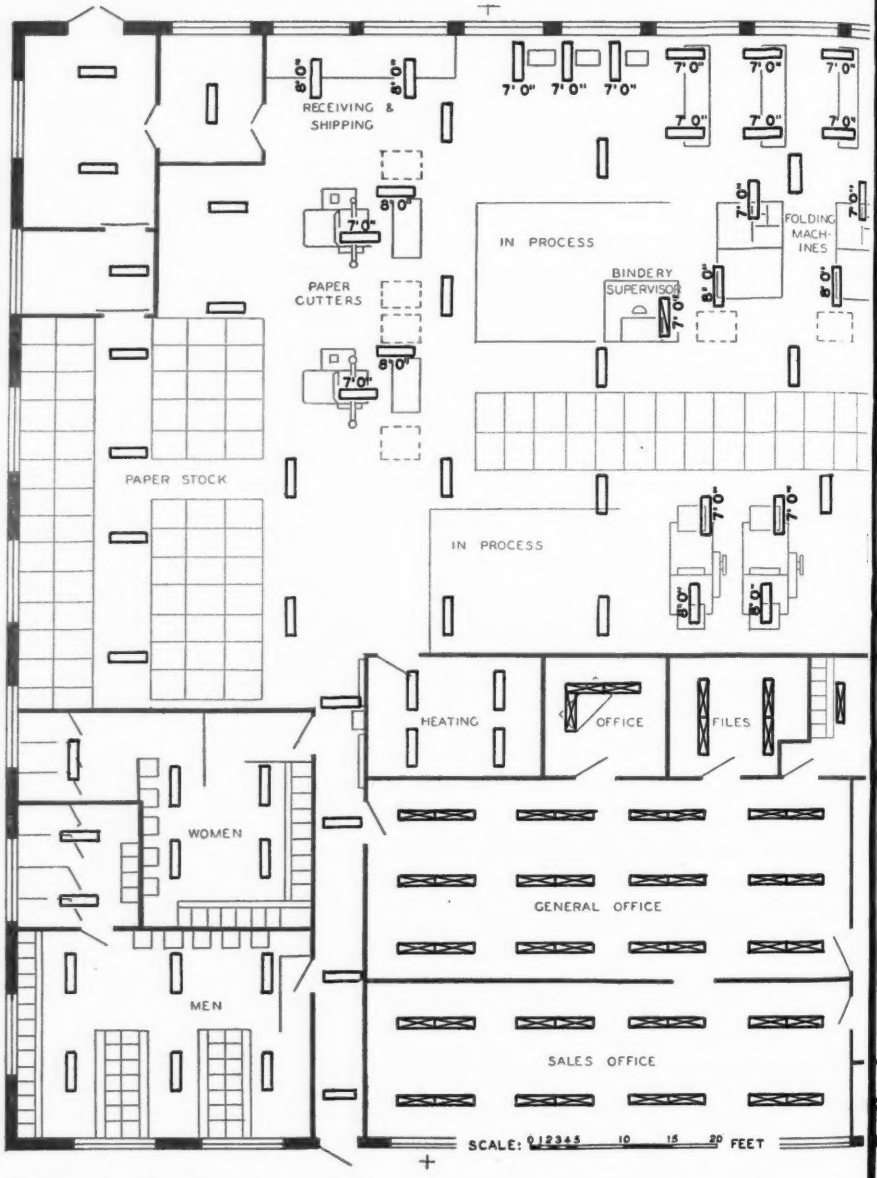
Why not light up your busier imposing tables and your more frequently used type cases now and leave the others until later? At least two three-tube lighting units located side by side should be used for each imposing table and a continuous line of similar units is required for each group of type cases. Fluorescent tubes of 4500 degree white color are recommended throughout the printing plant.

Proofreading is another difficult seeing task and requires one three-tube, milk-white glass covered unit located midway between the reader and the copyholder with the length of the unit at right angles to the length of the table.

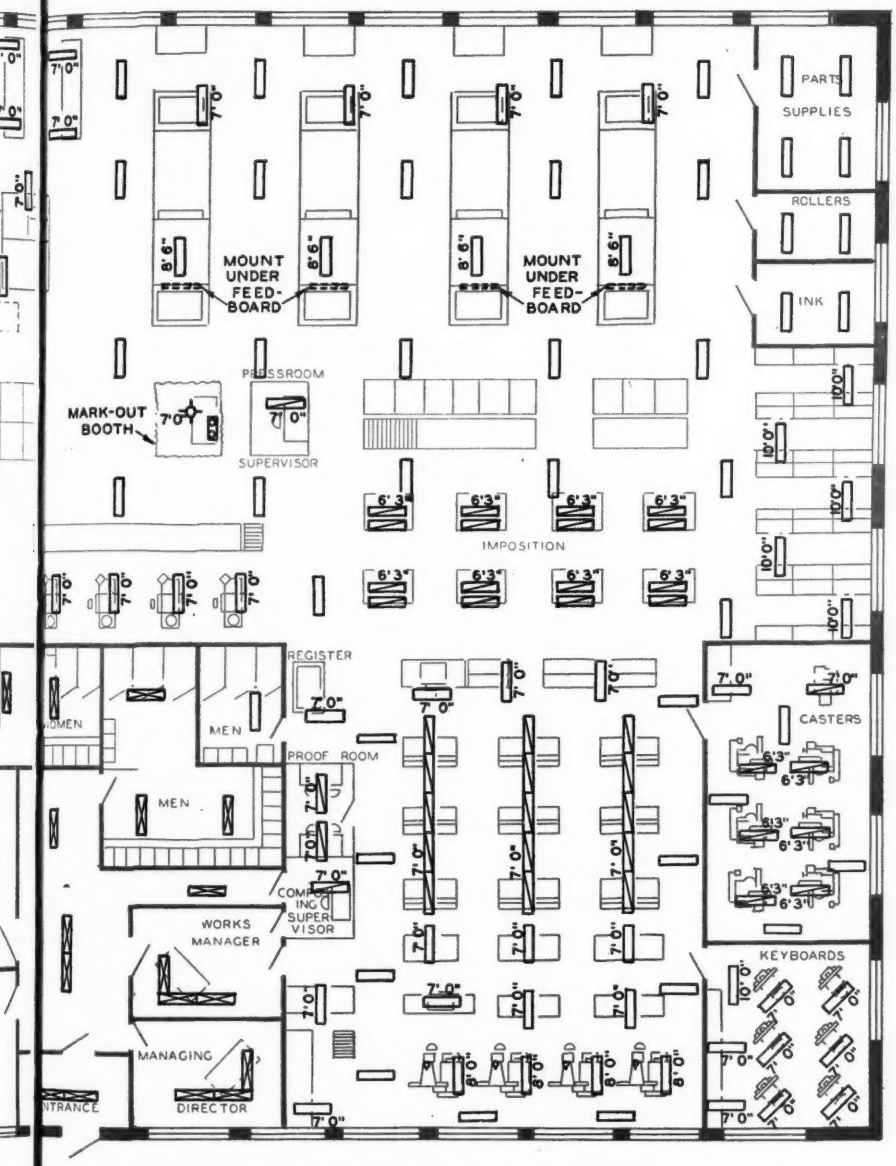
Manufacturers of line-composing machines equip their machines with a local lighting unit. It is suggested that these units be replaced with larger diameter reflectors equipped with milk-white glass covers and 100 watt incandescent bulbs. The milk-white glass covers will diffuse the light and will reduce the reflected glare from the polished surfaces of the machine. It's best to operate the overhead fluorescent lighting units as well as the local lighting unit in order to make it more comfortable for the operator.

Next comes the Monotype keyboards and the casting machines. A milk-white glass covered lighting unit is recommended for each casting machine and an open type unit for each keyboard.

The pressman's seeing tasks while making ready a press are quite different than those during a run. During makeready, special lighting units are recommended for under the feedboards of the larger two-revolution cylinder presses. These units will direct the light forward and downward toward the rear surface of the cylinder, producing a large area, low brightness light source suitable for seeing the type in the form. During the run the overhead lighting units will be sufficient. Some of these units are located to one side of the press rather than along the center line.



# g System For a Printing Plant




For example, the light over the delivery end of the press is located to the left of the pile of delivered paper so that the light is directed downward toward the semi-glossy surface of the paper and is reflected harmlessly off to the right.

Where is your mark-out table located? Why not provide a gray cloth booth around the table to keep out unwanted light, and install a special mark-out lighting unit that will provide a sheet of light across the surface of the table? Under light at this glancing angle the unevenness of the impression will show up like the bumps in a country road do under your headlights at night.

If you're doing considerable color work in your plant you can use this same booth for color matching by installing a 500-watt color matching unit with a dark blue glass cover that will correct the color of the light to 7500 degree north skylight.

Do pencil notations seem to disappear when you're working at your desk? Perhaps it's because your lighting unit has bare tubes and is in the wrong location in respect to your desk. Why not move your desk to a diagonal position in your office and then install three V-shaped glass-covered units in an L shape? Then glare is reduced.

**Key To Symbols**

Indicates porcelain enamel industrial fluorescent lighting unit, equipped with two 40-watt, 4500 degree* white fluorescent tubes. Mount units 10'-0" above floor unless otherwise indicated.

Indicates closed-end porcelain enamel industrial fluorescent lighting unit with milk-white glass cover, equipped with three 40-watt, 4500 degree* white fluorescent tubes. Mount at indicated height above floor.

Indicates low-brightness V-shaped glass covered lighting unit equipped with four 40-watt, 4500 degree* white fluorescent tubes. Mount units close to ceiling.

Indicates store counter type lighting unit equipped with one 30-watt, 4500 degree* white tube. Mount unit on underside of feedboard.

Indicates dark-gray cloth mark-out and color matching booth with a special mark-out lighting unit equipped with three 50-watt clear bulbs arranged to provide a sheet of light across the surface of the table. Control unit by a separate switch.

Indicates color matching unit with a 7500 degree* daylight glass cover and a 500-watt clear bulb. Mount unit 7'-0" above floor. Provide a separate switch.

Indicates 6¼-inch diameter lighting unit with milk-white glass cover, equipped with a 100-watt bulb. Mount unit on present bracket of line-composing machine.

** "4500 degree" designates the color of "white" light. The higher the degrees the bluer is the light.*

Rows of similar low-brightness units arranged in eight-foot sections are recommended for offices.

Last in importance in regard to seeing tasks are the aisles and storage areas. In general it is desirable to arrange the units at right angles rather than parallel with the length of the aisles. This is particularly true in aisles between bins because more of the light penetrates under the shelves from the opposite ends of the tubes making it easier to read the labels of the boxes on the shelves.

A general lighting system is satisfactory for storage areas. The units should be spaced twelve feet apart, ten feet above the floor.

At opening of convention, from left: John J. Deviny, Public Printer; Wayne Gaspar, president of Cleveland Club; Rabbi Julius Joseph Nodell, who gave invocation; MacD. Sinclair, chairman; A. Gordon Ruiter, retiring president; Gradie Oakes, new president; and Russell J. Hogan, first vice-president.

# Craftsmen Hold Twenty-ninth Convention

● JOHN J. DEVINY, Public Printer of the United States, and twice president of the International Association of Printing House Craftsmen, sounded the keynote of its twenty-ninth annual convention in Cleveland, on August 8. Registration exceeded 800.

As the keynoter, Mr. Deviny, speaking on "The Craftsman's Heritage," referred to the graphic arts as an "established industrial fixture in our social, business, and national life" doing a three billion dollar business annually, having 42,000 establishments in Canada and the United States, employing half a million workers—mostly skilled—with payrolls of over half a billion dollars a year, "usually spent in the communities where they are received, thus adding to the general prosperity of the areas in which printing and allied trades are located."

He named among heritages uninterrupted attractive employment, good working conditions, and "a great service to humanity in recording permanently the world's progress, its knowledge of the sciences, the law, and medicine."

"We of today have a glorious heritage for which we are indebted to public benefactors who have preceded us on this scene," said Mr. Deviny. "We are indebted to the craftsmen of our three principal processes for their painstaking care, their skill and their resourcefulness in adding utility and beauty to cold type and printing plates and to bound books, newspapers, and periodicals. We are indebted to the early printers of the pioneer days of the last century who, in sacrifice and privation, carried civilization and government in to the spacious Middle West, representing a major contribution to the setting up of a great empire in North America. They, with their small newspapers and job shops, were a factor for orderly government, for the improvement of morals, and for the betterment of social conditions in all of the communities where they operated."

Mr. Deviny paid tribute to employers "who over the years have invested their money and their skill in the conduct of our shops and plants, and have carried on a continuous and a successful effort to improve the business and managerial practices and procedures in the graphic arts." By sustaining this effort, Mr. Deviny said they have provided workers with "essential job security." Continuing, he said:

"Our heritage includes a debt to the manufacturers of our printing equipment, materials, and accessories, who, within the past 150 years, through their enterprise, invention, and financial courage have given us efficient high-speed equipment and supplies for use in the various graphic arts processes."

He mentioned the heritage represented by the Craftsmen's Movement which from its beginning attracted outstanding personalities who pooled information, skill, and other resources and made these available to anyone willing to come and get them. In concluding his keynote address, Mr. Deviny said:

"So we, here today, who are fortunate enough either directly or indirectly to be a part of the present-day personnel of the graphic arts and its allied functions and activities, have received this substantial heritage to be used by us, to be enjoyed by us, to be ours for the period of our lifetime. In other words, ours is an estate for life in the arts, the sciences, the professions of the graphic arts. We have a right to their use and enjoyment, but in their use and enjoyment it is our responsibility to leave this heritage unimpaired to those who will follow us. In fact, we should leave this heritage increased in stature, expanded in usefulness, and with greater life and vitality that it had when it first came into our possession. Only by sharing our knowledge can we compensate in substantial degree for the countless benefits which are ours to have and to hold during the period of our service to a great industry."

The international character of the convention was recognized at its opening by the mass singing of "America" and "God Save the King." MacD. Sinclair, general convention chairman, then called upon Rabbi Julius Joseph Nodell for the invocation. Wayne Gaspar, president of the Cleveland Club, gave the welcoming address which was responded to by Gradie Oakes, first vice-president of the International, on behalf of the visiting craftsmen. Mr. Sinclair turned over the meeting to International President, A. Gordon Ruiter, Boston Club, who conducted a brief memorial service in

honor of the craftsmen who died during the past year.

Two clinics engaged the attention of the craftsmen during the forenoon on Monday. Russell J. Hogan, New York, presided at the typographic clinic, and A. Gordon Ruiter presided at the pressroom operations clinic.

"Good Typography—Setting it Right at the Right Price" was the topic of Amadeo R. Tommasini, designer and production manager of the University of California Press, and president of the San Francisco Club. He used graphs to illustrate his points, besides numerous specimens. One point the speaker stressed was the importance of planning each job. He expressed the opinion that with present wage rates sky-rocketing, designers and managers of production cannot afford to permit faulty instructions or bad copy to go the plant to worry and puzzle high-priced workmen.

During the discussion period, one craftsman wanted to know why the printers should go to the expense of retyping copy if customers do not care about increased costs. Tommasini replied that customers should be urged to furnish the best possible copy, but in cases where proofs are all marked up it raises shop standards for the house to retype such corrections, and also insures more accurate results.

One man objected to the general attitude of men in the industry expressed thus: "We expect to lose money in the composing room but we will make money in the pressroom." He said that such an attitude was not in the interest of good management because it gave the idea to workers in the composing room that sloppy work was to be expected. He said that in the management of his composing room, serving many publications, the work was handled on a profitable basis and all workers were accountable for good clean work.

Another craftsmen suggested that one way to educate customers concerning need for furnishing clean copy was to take them through the plant and show them how single changes from copy might require resetting whole sections of the type matter. Russell Hogan, who presided, replied that publishers in New York put members of their staffs through an educational course in which printers co-operated, but even they offend by putting through poor copy, and return proofs on which alterations are marked carelessly. E. S. Swanberg, production manager, Spiegel's, Incorporated, Chicago, commented that the mail-order pages corrected by executives formerly were sent out to printers as marked up, but recently the rule was put into effect that chunks of copy or corrections and alterations were retyped with the result that alteration have been reduced 22 per cent.

Mr. Tommasini emphasized the value of premakeready work in the composing room, stating that precision tools paid for themselves in short periods of time, besides insuring a better job. He stressed the importance of a policy that when a job reaches the pressroom, "It must be ready to go." Use of plastic plates, determining margins for book work, and layout of composing rooms to avoid back-tracking, were among the topics discussed.

Everett A. Damon, assistant sales manager of American Type Founders, turned over numerous sheets of paper to illustrate his talk on "Type Speaks." His first sheet was blank, whereupon he said that the blank sheet makes no impression and it has no significance. The next sheet had a mark upon it, another had more, and finally a sheet appeared with type upon it. Then followed his definition: "Type is an interruption of space so organized into familiar symbols as to convey intelligence and create emotional response." The speaker proceeded to show various forms of type set for special purposes, remarking that "every piece of printing has a job to do." Continuing, he said:

"In printing, paper is important. So is ink and presswork. But what your customer sees, or his customers see, is the typography. Typography is the suit of clothes you wear when you call on your customers. Typography is the body of your automobile of which you are mighty proud, especially in front of your neighbors. Typography is your voice. What you say will never be heard or read, if you do not make a point of saying it attractively.

"Some sales messages, like some salesmen, never reach the buyer because they are not properly dressed," concluded Mr. Damon. "So let's dress up our copy and let it talk. There are hundreds of bold and light face types. We have looked at just a few, but from these you can readily see how simple it is to follow a theme with a type to match. Why not try it the next time you print a job?"

At the clinic on "Pressroom Operations" the first speaker was J. Tom Morgan, president of Commercial Printers, Incorporated, Columbus, Georgia, who is a member of the board of directors of the National Association of Photo-Lithographers. In his talk on "Combination Pressroom Operation," he said the ingredients of any printed job are: copy, typography or its equivalent in camera and plate work, paper, ink, and presswork. In considering the

**International officers for the forthcoming year, front row, from left: Russell J. Hogan, first vice-president; Gradie Oakes, president; Fred Baillie, second vice-president. Back, Pearl E. Oldt, executive secretary; A. Gordon Ruiter, retiring president; and J. Homer Winkler, third vice-president**

job from a combination printer's viewpoint, only one of the ingredients is the same, that of copy. Mr. Morgan described the steps required to produce a printed job and as he proceeded, he indicated wherein differences occurred in producing the job by the letterpress process and by the offset process. He spoke of the limitations of size of halftone photoengravings whereas the limit of size in offset plates is the limit of the size of the press itself. Makeready of a photoengraving is considerable while that of the offset plate is practically nil, so the speaker said.

Mr. Morgan said that the installation of a humidifying system to control his pressroom's humidity was a "life-saver." To further insure register he buys paper stock preconditioned by the paper mill to be in harmony with his standard pressroom humidity. He advised buying the better inks, saying that the ink "must hug the fountain, distribute properly on the rollers, must transfer properly to the paper, lay and trap properly with other inks on the sheet and must dry properly."

Referring to pressmanship, Mr. Morgan called it an "art" and commented that "the better the press, the better the chance for a good pressman to do a fine printing job—offset or letterpress."

Among things learned by a man who operates a combination plant, Mr. Morgan listed the following:

"You learn to put solid coverage of metallic ink on letterpress; the water on offset does the metallic sheen no good.

"You learn not to put that job with the beautifully blended vignette on letterpress but on offset, where you have no makeready trouble and are able to blend from solid to drop-out with ease.

"You learn to put small, short-run color jobs on the letterpress, and let the offset take the longer runs.

"You learn to let your letterpress handle most jobs that contain a lot of composition, and let the offset take the jobs with a lot of art.

"You learn that both letterpress and offset have a definite place in your operation and you wonder how you could operate one without the other. They make a perfect reproduction team."

Edward Nymark, plant manager of Maclean-Hunter Publishing Company, Toronto, speaking on "Press Production Control," said that an increasingly important factor in control is the climbing cost of wages and other items which make idleness of press equipment too costly. To prevent idle equipment, not only is production control necessary, so the speaker indicated, but equipment must be maintained in good order.

"We are concerned with preventative rather than curative action," said Mr. Nymark. "We maintain a card file system on which is reported anticipated need for parts and repair, the information being obtained from two sources. The first is a systematic inspection that is a maintenance department routine, and the second is pressmen's reports of mechanical difficulties."

Mr. Nymark described the method of production control which includes volume comprising two consumer magazines of over 300,000 circulation; thirty-four other publications ranging from 3,000 to 30,000 in circulation each; and a lot of commercial work. The three things the production control office is concerned about are: How the work can be printed most economically; what presses will be available at the required time; when the work must be completed.

"The first step in control is preplanning the assembly best suited to produce the work," said Mr. Nymark. "Specifications and requirements are marshalled and a makeup evolved that will provide sections of black and white and inserts or color signatures as needed. Impositions are developed to accommodate bleed pages and take maximum advantage of split fountains in color printing. The sequence of color is determined to obtain the best possible reproduction of each particular job. This involves page layout that places advertisements or editorial layout with due regard to the nature of subjects in each line of ink travel. At this stage the control can be considered to have produced the broad method by which a particular job or issue will be processed."

Mr. Nymark described the route slip, pressroom production board, many requisitions for paper, and other items connected with the production control system. He told how helpful the control board was recently when the pressroom was moved from downtown Toronto to the firm's new plant about eight miles away. Forty presses were moved but while they were being moved, production schedules had to be maintained without interruption. Presses were not dismantled but were transported as units with the result that the production board resembled a game of "checkers" representing manpower and machines. Thus machinists, electricians, movers, supervisors, and others involved had "full knowledge of when equipment was available for the part they had to play in the move and the deadlines that had to be met."

Mr. Nymark concluded his remarks with the statement that the production control in operation in the pressrooms which he described is in effect on practically the same basis in other departments of the company.

G. Stuart Braznell, president of Braznell Company, St. Louis, and a director of National Printing Ink Research, described a method of controlling the flow of printing ink with aid of a photoelectric reflection meter utilizing color filters. He said there had been always a great need in the industry for a method of measuring color in order that uniformity could be obtained from one side of a sheet to the other throughout a run, and from one run to another. He told of defects that interfered with such an achievement, including defects of the human eye in relation to color, variations in stock, the press, and the presence on the printed sheet of other colors.

The speaker discussed a photoelectric reflection meter made by the Photovolt Corporation, and told how by its use his firm was able to control the flow of color and by taking readings across stock was able to "graphically show where the flow varied." Continuing, Mr. Braznell made these remarks:

"We made exhaustive tests on all types of paper, presses, and different colors of ink, and found that not only was it accurate but in every case a reading taken of wet ink would be absolutely duplicated at a later time when the ink was dry. We had occasion to be running the same job on three different type presses at the same time and on three different stocks and were easily able to set up a standard reading so that when the fountain was adjusted to it we got uniform color. We have experienced the running of the same job in various cities on different equipment and paper, and have set up a standard reading which was followed out to the customer's satisfaction."

Mr. Braznell said that extensive tests conducted with the co-operation of the manufacturers of the machine resulted in the design of four color filters especially suited for the type of color control which he described. He expressed his belief that "the future will see great strides forward made in this system of color control."

Two clinics were held simultaneously on August 10.

B. D. Zevin, president of the World Publishing Company, Cleveland, said that he was approaching the subject of binding as a book publisher who realizes that what goes on in the shop affects sales efforts and promotion activities. He said that his prime interest is in merchandising popular priced editions of books. His company started forty-five years ago as an edition bindery, but embarked in 1928 on a career as a publishing house. With a mass market for popular-priced books, publishers demanded a mass production system. Thus rotary presses, magnesium plates, and plastic electrotypes have aided the booksellers, so Mr. Zevin declared.

"The big bottleneck in the mass production of books is in the bindery, where methods differ only in degree from the bindery methods of an outmoded day," continued Mr. Zevin. "Therefore we look for new developments in binding for our greatest reduction in costs. In the edition bindery field, exciting new developments are now in progress, most of them in the experimental stage with positive results to be achieved only after more research and development."

The speaker referred to new casing-in equipment being perfected which will case in a book, put in the bead, and dry it ready for jacketing within four seconds. He mentioned experiments being conducted with automatic jacketing machines, which will replace present hand operations. He said that automatically fed sewing machines are now being produced on a large scale.

"But the greatest deterrent to low-cost, high-speed binding has always been the use of animal glue adhesives," said Mr. Zevin. "When you must wait from twenty-four to forty-eight hours, depending upon the weather, for glue to dry between operations, you positively are not able to achieve true high-speed and continuous production."

Research work done by the Battelle Memorial Institute for the Book Manufacturers' Institute resulted in "pilot studies" now being conducted in binderies of the Kingsport Press and in Mr. Zevin's plant which promise a thermo-plastic adhesive which will dry in about four seconds.

Mr. Zevin also spoke of a better method of binding books which has been developed by his own company. He mentioned substitute materials for cloth as binding because cloth is being raised in price. Some books produced by the company are bound with kraft paper printed in four colors, then laminated with an acetic sheet which is applied to boards "with the result the book has both strength and beauty and will not assume a premature shopworn appearance in the store because of a mutilated jacket." He said that the cover not only has eye-appeal but has touch-appeal, and thumb marks can be removed with a damp cloth.

Otto Pelz, president of A. H. Pelz Company, Cleveland, showed specimens of sixteen different kinds of mechanical bindings and described the value of each. He indicated that

A. R. Tommasini, University of California Press, was the main speaker at the typography clinic

the perfect mechanical binding should have certain qualities which he enumerated.

Clarence Rohrich, president of the Akron Engraving Company, the first speaker at the photomechanical clinic, described photoengraving as a "reproductive and interpretative art." He said that 90 per cent of all pictures were printed by the letterpress process in newspapers, magazines, advertising literature, and periodicals, and that the photoengraving process represents "the best medium of visual expression." He stated that to reproduce varicolored copy faithfully, within the limits of three primary colors and black, requires technical knowledge, training, and skill.

Concerning research, he said that some photoengravers had incorporated under the name of Photoengravers Research and were carrying on a continuing effort through the Battelle Memorial Institute to develop improved methods of making photoengravings. He discussed the use of precision step-and-repeat machines in producing multiple plates in one or more colors which would register accurately and "eliminate much of the time consumed in locking up and registering forms." He also referred to the "vast re-equipment that has taken place since the war," which "guarantees the finest original printing plates ever produced by photoengravers."

William Stone, production manager of the Copifyer Lithograph Corporation, Cleveland, gave a demonstration of color separation with the assistance of Mr. Lindsay of General Electric Company and Andrew Balika, plant superintendent of Copifyer. He said that the purpose of all mechanical color separation work is to decrease the amount of hand work required to reproduce a color job. He criticized color-sensitive emulsions as being a source of trouble and said that "there has not been as much progress made in the last several years as expected."

"Most of the new developments have been on a laboratory basis," he continued. "One or two boxes of plates are made for experimental purposes and the whole development seems to stop at that point. We are particularly interested in this dry plate development."

The two concluding clinics of the convention dealt with mechanical operations. One was on gravure, presided over by J. Homer Winkler, and the other was a "share your knowledge" clinic at which Gradie Oakes was presiding officer. Allen C. Black, superintendent of the preparatory department of the Crowell-Collier Publishing Company, Springfield, Ohio, described color separation and platemaking as applied to gravure printing, and Frank A. Sportelli, of International Color Gravure Company, New York, had as his subject "Specialty Gravure."

At the concluding general clinic, John C. Rout, Bureau of Engraving and Printing, Washington, D. C., described the method of making steel engravings for bank notes, bonds, postage stamps and currency.

William C. Huebner, head of the Huebner Laboratories, New York City, in speaking on "New Targets in Printing Developments," showed a new relief image cylinder and other devices on which research work is being done by his organization. These were parts of the Electronographic press by which ink is transferred to the paper from the image cylinder without pressure. He said that the exhibit marks the changeover from laboratory tests, development work, and demonstrations to the beginning of commercial performances.

Mr. Huebner said that the first press would be delivered to Magill-Weinsheimer & Company, Chicago, as soon as it worked perfectly.

During his talk, Mr. Huebner mentioned seven targets in printing which he submitted as "graphic arts apprentices with a background of over fifty years of intensive work in the old branches of printing." The seven targets are:

1. Pressureless printing to combine all good image processes into one production unit for applying ink, pigment or dyes.

2. Finest quality images, by using all originals on the image-carrying surface from which the editions are produced for short or long runs, eliminating as far as possible guesswork in production.

3. All rotary image-surfaces, including phototextype: Mechanics of predetermined layouts, precision placement of the images according to the layouts, upon cylindrical surfaces, and according to the method of pigment transfer to be employed. To train craftsmen in the production of the new cylindrical image surfaces. To train operators for pressureless printing equipments.

4. Supply ink pigments and dyes for use in and on the new cylindrical image-surfaces, whereby images are transferred to the needed materials to carry the needed quality, dry in the required time, and help reduce the time of running the editions, and decisively reduce the over-all cost of production.

5. Supply a universal means of eliminating the need for pressure and makeready on relief-image-cylinders, eliminate all separate image original plates, electrotype, stereotype, or hand transfers, and eliminate the causes for uneven surfaces. Eliminate the need for water-roller systems on planographic printing surfaces and thus provide long life images for long-run editions. Provide better tone and color value control for gravure editions, without guesswork and other variables, such as carbon tissue.

6. By the elimination of pressure in all printing processes, use wider variety and lower cost materials, to the advantage of all. For instance, let's use a lower cost paper for the 24-hour service of newspapers.

7. Provide means whereby a new start can be made in printing by offering a variety of combinations of units, designed for a given size and volume of work, operating under the new systems. To build a new free craftsmen guild, and bring back the value of individual skill and pride in fine performance at profitable pay earned for services rendered.

Mr. Huebner stated it was because of different viewpoints on what research is needed that separate targets have been set up by different groups whose interests are separated by the various methods of printing. He gave reasons why new targets in printing were set up. His final reason was that "all three branches in printing represent enormous investments and enormous cost of production with decreasing returns on those investments."

Two convention sessions were devoted to consideration of problems of craftsmen's club management. At the club clinic directed by Pearl E. Oldt, employed International secretary, local officers presented specific club management problems.

The club management dinner on Monday evening was directed by Fred Baillie, superintendent of the Canadian Bank Note Company, Ottawa, who is Canada's representative upon the International board as a vice-president. Elmer Leach, Des Moines, gave specific suggestions on "The Care and Feeding of Speakers" which was so practical the audience frequently applauded during the discourse. Charles S. Weimer, of San Antonio, presented suggestions how attendance at local clubs might be stimulated.

Lee Augustine, Cincinnati Club, announced winners of the local club bulletin contests. Among clubs of less than 125 members winners were as follows: Utica was first; second, Honolulu; third, Ottawa. Among clubs of more than 125 members, winners were: first, Chicago; second, San Francisco; third, Philadelphia. Trophies were awarded to winning clubs.

Printing Week, observed during 1948 from January 12 to 17, was promoted by the clubs of Printing House Craftsmen in numerous cities as a result of the activities of the public relations committee of which Gordon J. Holmquist, Los Angeles club, served as chairman. He gave his official report at the convention and distributed booklets that showed many of the outstanding exhibits in various cities.

Mr. Holmquist and his committee have been allotted $1,000 for the national campaign for 1949 by the International Association of Printing House Craftsmen, but the local campaigns can be organized in the larger centers on a larger basis, so they say. In his recommendations, the chairman has indicated that there is no limit to possibilities.

## Conventions

### What — Where — When

**Advertising Typographers Association of America**
French Lick, Indiana
September 8, 9, 10, 11

**National Association of Photo-Lithographers**
Netherlands-Plaza Hotel, Cincinnati
September 15, 16, 17, 18, 19

**Mail Advertising Service Association**
Bellevue-Stratford Hotel, Philadelphia
September 26, 27, 28, 29

**Advertising Specialty National Association**
Palmer House, Chicago
September 27, 28, 29

**National Association of Printing Ink Manufacturers**
Palace Hotel, San Francisco
September 27, 28, 29

**Direct Mail Advertising Association**
Benjamin Franklin Hotel, Philadelphia
September 30, October 1

**Wisconsin Typographical Conference**
Racine
October 2, 3

**American Photoengravers Association**
Hotel Statler, Cleveland
October 7, 8, 9

**Inland Daily Press Association**
Congress Hotel, Chicago
October 11, 12

**Southwestern Association of Industrial Editors**
Rice Hotel, Houston
October 14, 15, 16

**International Association of Electrotypers and Stereotypers**
Palace Hotel, San Francisco
October 19, 20, 21

**Printing Industry of America**
Edgewater Beach Hotel, Chicago
October 20, 21, 22, 23

**Southern Newspaper Publishers Association**
Hotel Soveno, St. Petersburg
November 8, 9, 10

**New England Newspaper Mechanical Executives Association**
Hotel Statler, Boston
November 23, 24

# Here Are the Answers to Some Troubling Questions Encountered in Cost Accounting

By A. C. KIECHLIN

• "SHOULD I calculate a charge for interest on investment in my costs?" is a question printers frequently ask us. The charging of interest on account of the capital or surplus invested in a business for the purpose of entering this charge in the costs is a moot subject, even among cost accountants. Some advocate making the charge, others are against it. Some dispute the fact that the business should pay interest on the capital invested in it, contending that the profit on sales is all the business should be asked to pay.

Proponents state that a business must pay interest on borrowed capital, so why not pay on the investment in the business? Others contend that borrowed capital does not receive profits and therefore is not in the same category as interest on business investment. Some business men enter the charge in costs, claiming they could get 5 per cent interest on the money if they conservatively invested it elsewhere, hence their own enterprises should pay in excess of this percentage and the only way to assure this is to make sales carry the interest on the capital invested in the business.

### Interest on Investment

The usual bookkeeping routine is to enter interest on business investment under overhead expense and credit an "Interest on investment" account in the ledger. Profits are increased indirectly by the amount of this charge and although the printer cannot deduct this as an expense on the income tax return, he must pay a tax on the additional income earned thereby. In a locality where competition is keen and prices must be kept down to get top volume, the printer who does not include this charge in costs can sell for less than the printer who lists this charge.

Today, with money abundant and full employment, a charge for interest on investment may not affect sales adversely, but if we return to a semblance of prewar business activity and competition, then the inclusion of this charge in costs, if it begets higher selling prices, may curtail sales. We are not taking sides pro or con, but the printer should understand all angles of the subject, otherwise he may be led into muddy waters on sales and earnings. The printer must be sure that his net worth is computed accurately if he charges interest on investment in his costs, or he will compute this expense too high or too low.

"What is obsolescence?" is another query often hurled at us by printers. Defining obsolescence isn't hard but computing it is difficult. "Obsolescence" means out-of-date from the standpoint of profitable utility. In other words, equipment may be in good working order, but not profitable to operate because it is obsolete. The Treasury differentiates between normal obsolescence and forced obsolescence, which further confuses understanding.

We can't see much difference between these classifications. It would seem that all obsolescence is forced because no business man with equipment in good working order will do anything to make it obsolete. This condition is brought about by external factors, such as revolutionary changes in technological development that make equipment out of date, the introduction of higher-speed machines, equipment that is cheaper to operate, or equipment with more "buy appeal" if it is used in displaying merchandise, forcing the user of older equipment to buy more modern units to stay in business against competitors who buy these replacements.

Obsolescence should be included with the depreciation rate but how much depends upon the case. The printer must estimate as best he can. When obsolescence is forced by outside technological changes or other factors, the printer may find that he has short-changed himself on the write-off, that he must buy new equipment when his books show an unrecovered cost in the old equipment not yet written off. This unrecovered cost is a loss that should be charged to net worth or surplus and it may be taken as a tax deduction if considered as a loss of useful value and can be justified as such.

All extraordinary expenditures of this type should never be charged to current profit and loss because this would distort comparative business analysis. When analyzing the results of current operations and comparing these results with prior figures, be sure that all extraordinary expenses are eliminated from the figures under analysis.

### Extraordinary Expenditures

For example, one printer suffered a fire loss totaling $14,000. He carried $10,000 insurance. The $4,000 loss he charged to operating expenses and then complained that his profits for the year were below his average earnings. He was wrong. When the $4,000 fire loss was deducted his profits were a bit higher than average. This loss should have been charged direct to net worth. If a corporation, charge expenditures of this type to surplus.

The handling of loss on inventory confuses many printers. The proper way to handle such a loss is to estimate the average annual loss to purchases, say it is ½ of 1 per cent, then charge this operating expense proportionately each month. Such charges are not deductible on the tax return because the year-end inventory reflects this loss, and it cannot be taken twice. The same applies to the preparation of the profit and loss statement. For costing purposes, this charge is desirable, but see that it does not duplicate itself in the

**MEMO**

The last issue of the I.P. was almost up to par. Never, never leave out the "Specimen Review." I'll bet you're glad to get your feet on steady ground once more. Strikes get no one anywhere--boss or employe. In the case of your Chicago strike it hurt everybody for all time to come, pointing the way to cheaper and quicker ways of reproduction. I wish I could see into the future and determine what place the Vari-Typer and Fotosetter (and perhaps others) will occupy. But they're coming.--G.H.P.

financial accounts where outgo and income are recorded, because valuation of year-end inventory takes care of this loss.

What to do with good will, excessive bad debts, and short-costing of depreciation? These are queries we often get from perplexed printers who have good will listed on their balance sheets at a substantial value, who have a heavy backlog of bad debts and want to write them off, or who have written off too little depreciation and now want to bring their depreciable assets in line with a current appraisal.

Such items, when written off, should be charged to net worth or surplus, not to profit and loss. If you failed to take sufficient depreciation in prior years, you cannot get a tax deduction for the difference between estimated depreciation and actual wear and tear, neither can you get a tax deduction for the write-off of good will.

### *Tax Deductions on Debts*

You can get a tax deduction for bad debts if they are written off in the year they are ascertained worthless. You may lose out on a deduction for bad debts if you keep them open on your books indefinitely, which some printers do. The best way to hedge against this oversight is to set up a reserve for bad debts and charge off a certain percentage every year based on the average bad debt loss over prior years. However, if you have been using the direct method, charging off bad debts as they become bad, you cannot change to the reserve method unless you get the consent of the Commissioner of Internal Revenue. The reserve method has a big advantage in costing because it equalizes bad debt expense.

Printers sometimes lease properties and make improvements on them. In this connection, they frequently ask us how to account for this expenditure. They should depreciate the investment over the years of the lease or the useful life of the improvement and thus include the charge in their operating costs to get reimbursement in their selling prices. They can get a tax deduction on the same basis. If the improvement is written off in one lump sum, it should be charged to net worth or surplus, but the Treasury will not permit a deduction except on the basis of its depreciation.

Sometimes the Treasury will refuse to allow more than a certain rate of depreciation and the printer may feel that this isn't enough to cover the actual wear and tear.

"What can I do?" they ask. "Use the permissible deduction in my costs and lose money, or increase the deduction to get equitable reimbursement from customers? How shall I solve the problem?"

Charge whatever depreciation expense in your costs that you consider necessary to earn a reasonable profit. As long as your books reflect actual income and outgo so that you pay the correct tax, they may contain accounts that are not permissible deductions on the tax return. The income tax laws do not always square with conservative accounting practices and business management. You may enter in your costs any legitimate charges that will help you run your business with maximum efficiency. When you prepare your return, include only the figures that the Treasury expects you to list to arrive at the correct amount of the tax due the government.

Printers who talk much about the profit on sales, earnings on investment in the business, and the returns on outside investments overlook one of the most profitable investments in the realm of business. That is the commercial discount. Too few printers take advantage of it. In some cases it pays to borrow from the bank to get cash discounts. The following table shows how much the printer is able to clean up by discounting his bills:

1% in 10 days, net 30 days—18% a year
2% in 10 days, net 30 days—36% a year
2% in 10 days, net 60 days—14% a year
2% in 30 days, net 60 days—24% a year
3% in 10 days, net 60 days—21% a year
3% in 30 days, net 60 days—36% a year

Obviously, with bank interest on straight loans around 6 per cent, sometimes less, and installment loans around 12 per cent, it pays the printer to borrow and take the cash discounts.

We know some who pay their rent with cash discounts. However, it is unwise to go all-out for cash discounts without considering other factors. Men have gone in the red by letting discounts influence them to overload stocks. It costs money to carry an inflated inventory, often more than the discounts earned thereby. Unless you can sell within a reasonable time, it is usually unwise to buy in large quantities to procure a quantity discount.

### *Watch Rate of Turnover*

Turnover is a factor that must be reckoned with. Too low a turnover means loss, and over-buying often begets low turnover. Consider turnover before quantity discounts. For some time printers haven't had to worry much about over-buying. They have been too hard-pressed to get enough materials for re-sale. In many fields, however, the pipe lines are filling up and when the buyer's market comes to town again the most successful printers will be those who make a careful study of "buyology" and all of the many operating elements which are contingent to it.

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Putting the *punch* in advertising literature can't be done with a *round-hole* machine.

## Centering Short Lines on Line-Composing Machines

The problem of centering very short lines on line-composing machines is easily solved by the use of the card shown in the accompanying illustration, the South Dakota State College printing department has discovered.

One of these cards is kept near each line-composing machine and close to the composing room saw. Whenever a line is to be centered on a measure less than 10½ picas, the linotype operator centers the line on 10½ picas. The floorman can then easily center the words on any shorter measure by cutting the slugs in accordance with this chart. Figures before the decimal represent picas; figures after the decimal represent points. Thus 6.3 means 6 picas and 3 points.

This system saves the operator a great deal of time, particularly when the job calls for such short measures as 3 or 4 picas.

**Center Type on slug 10½ picas long. Saw front end of slug first.**

| Wanted Picas | Cut First | Cut Second |
|---|---|---|
| 2 | 6.3 | 2. |
| 2½ | 6.6 | 2.6 |
| 3 | 6.9 | 3. |
| 3½ | 7. | 3.6 |
| 4 | 7.3 | 4. |
| 4½ | 7.6 | 4.6 |
| 5 | 7.9 | 5. |
| 5½ | 8. | 5.6 |
| 6 | 8.3 | 6. |
| 6½ | 8.6 | 6.6 |
| 7 | 8.9 | 7. |
| 7½ | 9. | 7.6 |
| 8 | 9.3 | 8. |
| 8½ | 9.6 | 8.6 |
| 9 | 9.9 | 9. |
| 9½ | 10. | 9.6 |
| 10 | 10.3 | 10. |

Pictured at annual outing of Printing Industries of Philadelphia at Llanarch Country Club are, from left to right, Harold F. Fiedler, executive secretary; David Sloane, executive director of National Association of Printing Ink Makers; and Herman F. Eberding, chairman of the annual meeting of National Publishing Company

On behalf of his company, Jack Dabney, left, assistant sales manager of Harris-Seybold, receives a trophy presented by Harry W. McHose, president of the American Public Relations Association, for Harris-Seybold movie "How to Make a Good Impression," which was chosen best public relations film of the year

Right: Walter E. Howe, art director of R. R. Donnelley & Sons, Chicago, has been chosen president of the Society of Typographic Arts, Chicago organization

Robert A. Kramer, left, president of Cincinnati Craftsmen club; Pearl E. Oldt, center, executive secretary of IAPHC; and Lee Augustine, committeeman, are pictured at entrance to International Association's new permanent headquarters in Cincinnati

# *People* IN THE NEWS

P. P. Hausher, who is the newly elected president of the Tulsa (Oklahoma) Club of Printing House Craftsmen

Robert Pollock, fourth district representative of the International Association of Printing House Craftsmen

C. A. Harwood, the Pacific district manager of the Printing Machinery Division of Electric Boat Company

R. B. Renny, Seattle, president of the Pacific Society of Printing House Craftsmen for the ensuing year

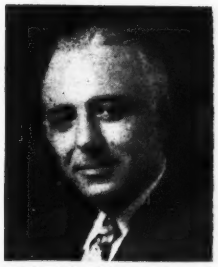
John D. Swigart, president of Swigart Paper Company, Chicago, this year celebrating its 50th anniversary

Victor Van Audenhove, of Albany, is second district representative of International Craftsmen Association

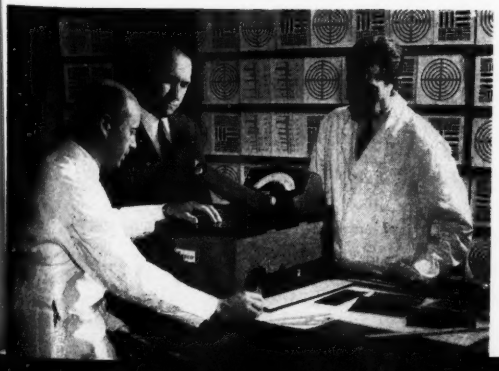
Three of the new officers of Printing Industries of Philadelphia, from left: first vice-president, J. Wallace Scott, Jr., Allen, Lane & Scott; president, John S. Williams, Williams & Marcus Company; and secretary, William A. Rigley, R. W. Harnett Company

Ray C. Cook, sales director of the printer's equipment division of the Hamilton Manufacturing Company

Doyle D. Johnson, president of nineth district conference of Craftsmen to be in Oklahoma City next year

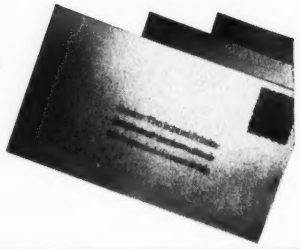


Michael Annick, the general sales manager of Rutherford Machinery Division of Sun Chemical Corporation



Monroe H. Sweet, left, is demonstrating his new Ansco color densitometer to Allan Williford, vice-president in charge of Ansco Division of General Analine & Film Corporation; and Dr. Herman Hoerlin, on right, chief physicist of Ansco Division

# Letters to the Editor



**BRICKBATS OR BOUQUETS . . . THEY'RE ALL WELCOME**

### S AND THE OLD LOOK

ON PAGE 47 of the May issue of THE INLAND PRINTER is shown a reproduction of The Old Look that undoubtedly passed the inspection and received the approval of every printer who saw it. But do you know that if some old-time printer should come to life and take a gander at it, he would open his eyes wide in astonishment? We seem to think now that the near-ancients had no small lower-case s but used that long fellow on all occasions. You will discover the mistake if you look over some old manuscript. The small s was in use, but only at the end of words. Thus the word "miss" was written something like this: mifs.

Should not this be called to the attention of modern printers who are trying to achieve The Old Look?

Occasionally we see what is claimed to be an original copy of an old Ulster County paper. All I have seen were fakes, pure and simple, and the fraud can easily be detected by any printer, for where the long s was used in the original the publishers of the reproduction were forced to use the lower-case f, which would not be noticed by the ordinary layman.

In the May issue there also appeared an interesting article on Will Bradley and the types his lettering inspired. It sems to me the lower case of the currently popular Valiant style is hung on the Bradley skeleton, with a broadening of the face, while the caps are more on the gothic order and Bradley leaned toward text.

ALEX FRANZ,
*Charlotte, Michigan.*

### COMMENTS FROM AFRICA

IT WAS a pleasure to hear about the methods of production adopted by the Chicago *Tribune* in meeting the strike.

It is most interesting to see the result of the efforts made by the management. My observations thereon fall under the following headings:

A. The production of typewriters turning out copy with letters proportional like printers' type goes a long way to eliminate one of the principal objections to their use in emergencies by newspaper houses. They may eventually be found suitable for certain classes of work on a permanent basis. Machines from the Vari-Typer Corporation have been used in this country (Africa) for some time and I have been impressed with their possibilities.

B. It appears to me that the "Fotosetter" of the Intertype Corporation may eventually prove to be the most satisfactory but I do not rule out the possibility of further improvements by the Vari-Typer Corporation bringing their machines into the lead.

C. The obvious weaknesses of the "temporary" or "substitute" methods of production are: a lack of clarity for headings or captions; the total space taken up by matter set is greater than under existing normal methods and results in either less space available for advertising with a consequential reduction in revenue or less matter can be included in both news and ads.

D. This emergency in the States may result in "stepping up" the progress of the new methods of production with the result that, as in the case of the typesetting machine at the early part of this century, we will find a changeover from the old methods which will result in a big dislocation of labor.

E. It will be interesting to see whether the unions (and to a lesser degree the employers) are able to meet the situation that would arise through the general introduction of these new methods and if they would facilitate re-employment of displaced journeymen in other operations which may or may not be associated with the new technique.

F. As in the case of the typesetting machine and the introduction of looseleaf ledgers and card indexes, the new processes are a normal (though perhaps painful for some people) development resulting in greater efficiency and reduced cost. How to meet the rising costs of production has undoubtedly been one of the principal problems of employers during the past seven years.

G. Shall we see any efforts made by unions concerned or by some employers who may be alarmed at the possibility of their equipment becoming obsolete, to try and retain the normal existing production methods and equipment? This can only be done by improved quality and reduced costs, both of which will be very difficult to obtain. In regard to this aspect of the matter I am reminded of an effort in this country, early in the century, when a special picked team of union men endeavored to give production under test, with a view of showing that the then new typesetting machines were not an economic proposition.

H. The ability of newspaper publishers to produce their publications, though on a lower level, may have a restraining effect when future demands are under consideration.

There is big expansion going on here (Africa). The only drawback is we have not got the population. Perhaps, like elsewhere, accommodation is the trouble.

NAME WITHHELD.

### PROBLEMS IN AUSTRALIA

YOUR newspaper folk certainly went through a period of disturbance caused by the unions. It seems to me that once upon a time unions were very necessary organizations and they were able to win for the men from reluctant employers better conditions than they then had. This was all to the good. I think that in days gone by the reputation of the employers in looking after the needs of the men was nothing to be proud about, but the pendulum has swung too far the other way. Now the men, instead of merely asking for what is right and reasonable, are asking for all that they can grab. I believe that industry throughout the world is suffering as a consequence from this desire to grab all while the going is good.

Mind you, I think some employers are equally guilty in this matter and would still exploit employes if allowed, but on the whole management generally has a livelier sense of responsibility in regard to the men employed and from a purely selfish point of view has realized that a well treated employe is better than one who is worried in his daily employment because of distress over personal finances.

I lose patience very quickly with the men who, while being treated fairly and given all reasonable care, still take every opportunity of reducing production and raising costs. It seems to me a short-sighted policy that is bound to end in disaster.

America is a great industrial country and can do wonders when it comes to mass production but even the U.S.A. with all its resources cannot stand ever-increasing production costs along with an ever-reducing production output.

We in our country (Australia) can much less afford to be operating on higher and higher costs. I am afraid we are losing the wonderful opportunity that presented itself following the war. During the war we learned that we could produce many things that we hitherto thought impossible and had we as a country been willing to work, and work hard, I am sure we could have made some real progress,

but in common with every other place we have been trying to get something for nothing.

These production problems are very much with us in our company at the moment. The problem of rising costs is ever present and although we still are in a sellers' market we experience very natural opposition to high prices. The public does not want to pay high prices for books and our English publishing houses also are competing.

NAME WITHHELD.

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• OUR proofreader—otherwise a nice girl—finds amusement in the mistakes of others, blithely forgetting such personal episodes as letting "house" go through for "hose" from manuscript to okayed page, and the horrific difference it made.

She told us about this: The Army Register listed Captain James Parker as a major, while he was prisoner of the Japs in the Philippines. When released, he received back pay on that rank—just $5,000 too much.

The House Armed Services Committee made the error legal, authorizing the overpay. We don't know what happened to the one who made the mistake —shot at dawn, probably, an occupational hazard of proofreading.

# INFRA-RED SHEET HEATERS ARE VALUABLE AIDS

The favorite gas-flame sheet-heater of yesteryear was the Johnson Perfection Gas Burner. Johnson was way ahead of his time. His original hand-wound solenoids, the electrical mechanism for turning the gas on and off automatically, may still be seen. He made these by hand for years for use on printing presses long before they were thought of for other industries.

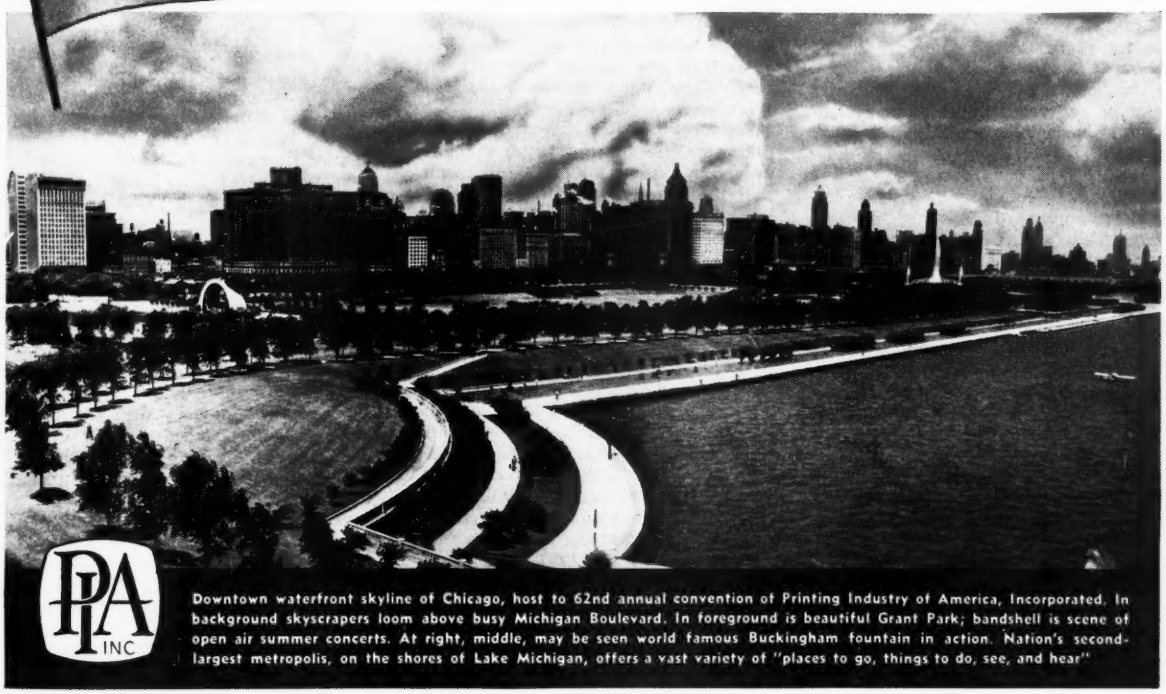
In those days every argument was used to keep the heat back close to the cylinder—as close to the impression as possible, since it is more efficient there in the initial setting of that portion of the ink vehicle which is the first to filter into the paper. It took a deal of selling to get printers to put heat on the carriage, the only practicable location for the gas flame. Many printers objected to changing over to the "grasshopper" and wanted to retain the "fly" delivery because the sheets do not have to be turned over.

The solenoids with which Johnson pioneered are a vital part of the infra-red sheet and web heaters which have become the modern favorite. Now a deal of selling is needed to induce the printer to use heat close to the cylinder where it is most efficient. Those who do use it there are well pleased and as far as possible have gone back to the fly delivery which lays the stock properly piled for printing the second side. Thus things go round and round and sometimes come back to where they started.

Installations of the infra-red heaters on rotary and specialty presses without carriage delivery proved that the ideal location for the sheet and web heater is close to the impression—as close as practicable. This is further substantiated by results obtained with infra-red heaters in the pulp and paper and textile industries and for drying over conveyors of many kinds.

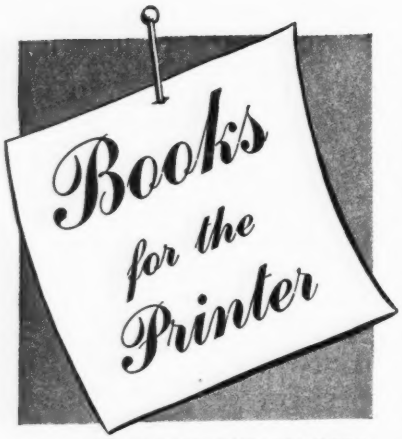
The possibilities of the infra-red heater have not yet been plumbed by printers. Not many know that the infra-red rays produce heat only when they are absorbed by the ink on the freshly printed sheet. The rays do not depend on air for heat transfer nor do they heat the air between the solenoids and printed sheet. There is no carbon monoxide to vitiate the air and "dope" the workers in the room. There are no hazards from fumes and open flames.

Those printers engaged in printing work on which the anti-offset spray must be used for economical production will find powerful assistance in the drying problem in the use of an infra-red sheet-heater close to the cylinder, which assists drying with less amount of spray, a vital consideration when overprinting follows on the initial impression on the sheet.



PIA INC

Downtown waterfront skyline of Chicago, host to 62nd annual convention of Printing Industry of America, Incorporated. In background skyscrapers loom above busy Michigan Boulevard. In foreground is beautiful Grant Park; bandshell is scene of open air summer concerts. At right, middle, may be seen world famous Buckingham fountain in action. Nation's second-largest metropolis, on the shores of Lake Michigan, offers a vast variety of "places to go, things to do, see, and hear"




**AS A SERVICE TO OUR READERS, THE BOOKS REVIEWED HERE MAY BE ORDERED DIRECT FROM OUR BOOK DEPARTMENT**

COATING AND INK RESINS, A TECHNOLOGICAL STUDY, by Dr. William Krumbhaar, head of Krumbhaar Chemicals, Incorporated, presents an exhaustive study of resins in their application to protective coatings, overprint varnishes, and printing inks. As the author states, "this book endeavors to supply the theoretical background of the chemistry and physics of the resinous materials, as far as such conceptions can be supported by actual experimental evidence."

While the book can hardly be classed as being of direct interest to the printer, having more of an application to the manufacturer of printing inks and over-print varnishes, or to the ink chemist, one section, on "Resin Application in Printing Inks," may be said to emphasize the importance of selecting the proper ink for the purpose for which it is to be used.

The book is priced at $7 a copy, and may be ordered through THE INLAND PRINTER book department.

PERSONNEL MANAGEMENT FOR EXECUTIVES, by Ross Young, is a book for personnel managers. In opening his first chapter, the author refers to personnel management as "the newest profession." In his preface, he says: "The rise of scientific movement in management has been a thrilling experience that benefited all the people. Unfortunately, there has been a distressing technological lag in the most important business of all, the business of working with, under, and over people.

"The reluctance of management to use also the human sciences is not in character for the finest leadership in history. Whatever the causes of that reluctance and technological lag, the fact is that great rewards and even greater penalties await all firms in the New Competition. Those men and companies that have the vision to humanize and to psychologize every daily practice will have enormous competitive advantages."

Carrying along this train of thought, the author takes up the place of the supervisor, supervision and profits, instruction, human relations, motivation, and so on, through to some principles of management, human nature, some supervisory bulletins, and closes with a list of visual aids for the use of the personnel manager in his training program.

This book is priced at $2.50.

DURER'S 1511 DRAWING OF A PRESS AND PRINTER, by Ray Nash, published by the Department of Printing and Graphic Arts of Harvard College Library, is distinctly a collector's item.

A collotype reproduction, made from a photograph of the original drawing by Albrecht Durer in the Bonnat Museum at Bayonne, is the central feature of the book, accompanied by a delightful essay on the pictures and descriptions of the early printing presses.

The Durer drawing of 1511 shows the printer at his press in the center, with a blacksmith at his forge on the left and a baker at his oven on the right. A leading expert on Durer has described the drawing as a satirical allegory on the profession of a city clerk.

It is noted that Durer erred in one detail of his drawing—the screw goes the wrong way, so that the pressman, when pulling on the bar, would raise the platen instead of lowering it to make the impression.

A limited edition of 550 copies, the book was printed at the Anthoensen Press, Portland, Maine, in Janson type on Oxbow paper. The collotype reproduction was by the Meriden Gravure Company.

DANGEROUS WORDS—A GUIDE TO THE LAW OF LIBEL, by Philip Wittenberg: "The writer, the reporter, the editor, the publisher are all presumed to know the law of libel and are held accountable for error or misconception even though lawyers and judges differ about what that law and its interpretations are." Thus writes the author in his preface.

All those who write for publication, and especially the copy writer who goes over copy before it is put into print, must be conversant with what constitutes libel, at least with the basic laws of libel. No one can foretell, however, just what interpretation lawyers, judges, or juries may apply to a word or a phrase. The only safe rule is to avoid any words or statements that may be interpreted as impunging a person's honor, his character, his integrity, or his personality.

A study of interpretations that have been placed on words or phrases during libel proceedings should be made by all who publish or write for publication. Here is where Philip Wittenberg has performed a valuable service in his book. He presents the results of his examination and analysis of thousands of cases, plus his consultation of text books, law review articles, and other sources.

In his first chapter the author takes up "What Is Libel?" He then goes into the interpretation and construction of language; libel in headlines, photographs, cartoons; the privilege of criticism in political matters; anonymous libel, and so on through to defamation by radio, terms judged libelous, and a table of cases.

"Dangerous Words—A Guide to the Law of Libel," by Philip Wittenberg, $5 a copy, may be ordered through THE INLAND PRINTER book department.

TYPE FOR BOOKS AND ADVERTISING, by Eugene M. Ettenberg (manager of The Gallery Press, New York), will offer many enjoyable and profitable hours to all interested in type and its uses. To the experienced typographer it will offer much in the way of inspiration; to the beginner it will offer a world of instruction plus incentive to exert additional effort toward excellence in typographic production.

Starting with what we might call the elementary phases of typography in the first chapter, entitled "The Tools of the Typographer," Eugene Ettenberg goes into the things the typographer needs to have at hand in the way of tools and reference works: He also goes into methods of casting copy, or copy fitting. In his second chapter he takes up type anatomy and thoroughly discusses the four classes of type.

The third chapter takes up the study of "Type Families and Their Cousins and Their Aunts." Then comes "Typographical Niceties," pointing out the "tremendous trifles" or the "little details" which, given meticulous attention by the typographer, "lift so-so typography into the more distinguished class."

Recognizing type faces, making type layouts; periods of typography, covering the 15th, 16th, 17th, 18th, and 19th centuries; masters of typography in the 20th century, and so on, are covered in succeeding chapters, leading up to Chapter 9, "20 Type Men Speak." Here are reproduced examples of the work of twenty master typographers, work submitted at the author's request that they send samples of what they considered were their best and most challenging type pages and also tell in their own words why they consider them good. There is much to be gained by a study of this chapter alone.

The final chapter combines "Modern Typography" and "Making the Better Book or Advertisement," the latter consisting of quotations from typographic authorities, past and present, and leading to a list of schools where printing and art are taught, also a list of books for the type man, and a glossary of type face terminology and the more common printing terms.

Eugene Ettenberg has included a wealth of material, historical and modern, practical and inspirational, which makes his book one that should have a prominent place in the working library of every practitioner of the art of type usage.

"Type for Books and Advertising," by Eugene M. Ettenberg, 160 pages, 8½ by 12 inches, is priced at $6.00, and may be ordered through the book department of THE INLAND PRINTER.

# What's New? in Equipment and Supplies

THE ROTASHAVER, announced by the Monomelt Company, is designed to plane flat work up to an area of 12 by 15 inches, singly or in groups, to desired heights as indicated by the micrometer within range of heights from .055 to .940 of an inch. The machine is 70 inches long, 24 inches wide, 40½ inches high to work table; is operated by a 2 HP motor and is equipped with a solid cast iron web-table upon which cuts or blocks are placed to be planed, the table moving only back and forth. A chip-catcher eliminates flying metal. An automatic vacuum exhaust chip-disposal system is optional. Plates, face downward, are held in place by hold-down fingers which grip the plates across entire width, regardless of thickness, to avoid vibration. The steel cutter has ten spiral teeth, and the micrometer is enclosed in the side of the cutter-head to avoid its being bumped. Wood or metal bases may be shaved by the machine, such as stereotypes, electrotypes, zinc-engravings, plastic plates, stereo base, or wood bases.

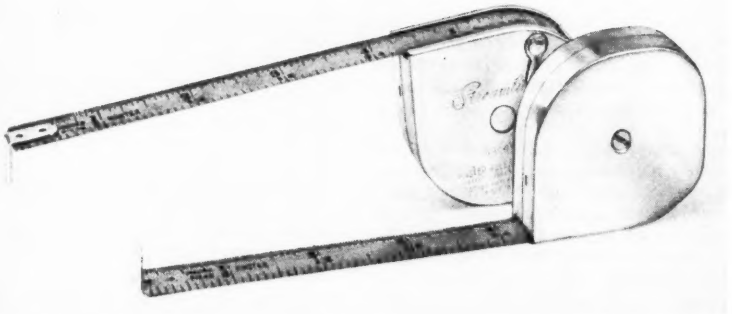
Rotashaver designed by the Monomelt Company

A BENCH-TYPE hydraulic press for molding rubber plates has been announced by Preco, Incorporated. The press produces 40,000 pounds platen pressure, incorporates a two-stage hydraulic hand pump; and the platens, 8¾ by 12 inches, are electrically or steam-heated and water-cooled. Accurate temperature and hydraulic controls are features of the press. Phenolic materials are used for molding the plates, small sizes of which can be completed within a few minutes.

DALTON-INGRAM Company has announced its MV "Mechanical Thumbs" designed for separating and controlling paper stock in the feed pile in connection with operation of a Miehle Vertical Feeder. Basically the new model device is similar to that of Model KL designed for use in connection with the Kluge Feeder. The device consists of two small machines, one to serve at the right- and the other at the left-feeder table guides. Each machine consists of a rocker-arm with a tramper and a flexible steel separator tongue which work together to insure that each sheet of paper feeds into the press evenly.

A PRE-REGISTERING machine, using rays of light instead of mechanical pointers to position plates in a set of color stereotypes, has been announced by Wood Newspaper Machinery Corporation. The machine trims two curved edges and one straight edge of all of the plates in a color series to coincide with the copy on the printing surface, thus causing the plates to be in hair-line register with each other and ready to lock up for press operations. The "light-ray control" consists of four indicating devices, each of which is individually adjustable, longitudinally and circumferentially, with respect to the printing plate. Each indicator includes a light source directed through a series of lenses, one of which is engraved with a cross-hair. This cross-hair is projected directly upon the surface of the plate which simplifies matching register marks carried by the plate with the cross-hairs projected on its printing surface by the light indicators. It is believed by the manufacturers that the use of the pre-registering machine will increase the use of multicolor printing by newspapers.

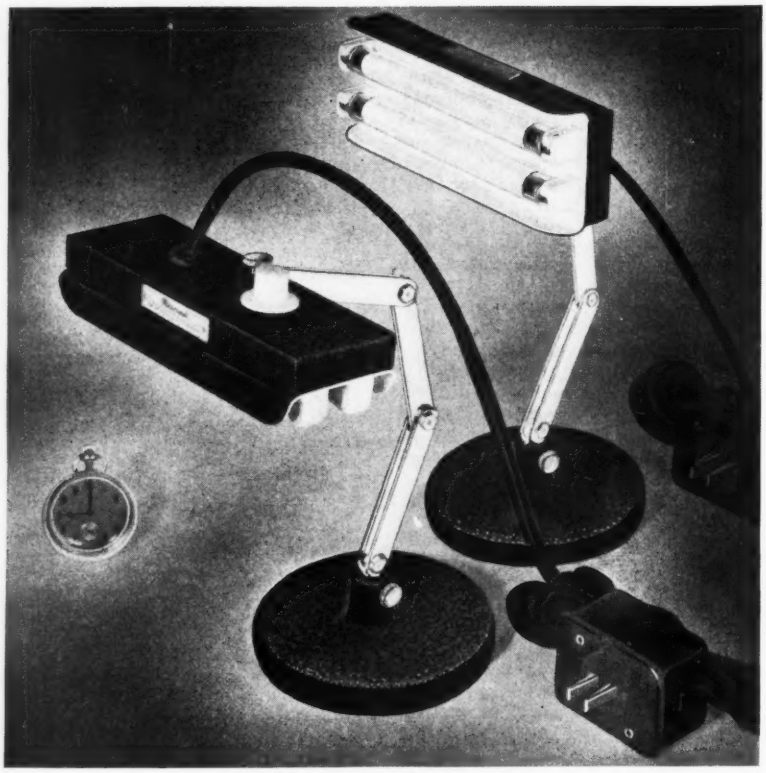
Machine uses rays of light for positioning plates



Master Rule Manufacturing Company's new 6-ft. rule, concave steel tape, graduated in picas and inches

A SIX-FOOT rule, designed for printers, made of concave steel tape, with graduations of pica measurement on one edge and inches on the other, etched on both sides, has been announced by Master Rule Manufacturing Company. The end of the rule is designed to grip the edge of the object to be measured, and the case is so contructed that the device can be taken apart for cleaning purposes.

A MINIATURE fluorescent lamp, 6¼ inches long, having 4-watt bulbs with a life of 2,500 hours, designed for close-up work, has been announced by Stocker and Yale. Its illuminating power is 450 foot candles at three-inch working distance and a heat value of 120 degrees. Its operation is controlled by a manual switch, starting instantly. Its weight is eight ounces and it is portable. Miniature fluorescent magnification and microscope lamps are also available.



**Miniature portable fluorescent lamp, designed by Stocker & Yale for close-up work, weighs 8 ounces. Stocker & Yale also manufactures portable miniature fluorescent magnification and microscope lamps**

A NEW stereoscopic shop microscope to reveal minute details for use of engravers and others engaged in industrial operations has been announced by American Optical Company, Southbridge, Massachusetts. The new microscope provides both stereoscopic vision and magnification of minute parts and details of the objects observed. It is available in three powers, it can be used bolted to a machine or independently. Cabinets are supplied with all models.

OF SPECIAL interest to publication printers who prefer photoengravings flush-mounted on all four sides is a new mass production flush-mounting system developed by the Lauck Manufacturing Company, Berkeley, California.

The main pieces of equipment which the engraver uses in the process are a coating machine, a gas plate, and a roller press. Bostik cement is applied to the surface of the blocking wood by passing the wood over a revolving coating roller, and allowing to dry for an hour or more. Quantities of wood may be coated at one time, tied into bundles, and stored on edge.

Plates to be mounted are beveled flush, marked with a Tempilstik crayon, and placed on a gas plate for heating. When they have reached 350° (indicated by the disappearance of the Tempilstik mark), the plates are placed on a piece of the coated blocking wood and sent slowly through a roller press. The mounted plates come out the delivery end completely ready for the sawing and flush-trimming operations.

When operated at capacity, the Lauck method effects a time-saving of 60 per cent over nailing, it is claimed. Further time is saved by elimination of plates returned for flushing when the customer has failed to mark instructions on the copy.

Cold plates cannot come off the wood, it is said, but they can be removed easily by reheating. There is no danger that type cleaning solvents will loosen the plate from the block.

A THREE-INCH, "baby size" Hi-Speed quoin has been added to the line produced by Challenge Machinery Company. Each is a self-contained unit, requiring no reglets, and having as part of it, an indicator registering the point at which the form locks or unlocks, so that when the form is used for register work, accuracy can be achieved in relocking it.

THE HEAVY Duty Super Speed 7 Saw Trimmer, successor to Super Speed 7, has been announced by Turner Printing Machinery, Incorporated. The table top of "Meehanite" iron, a large ball-type micrometer, a gauge block with trigger mechanism, and an all-purpose sawblade are among the features of the saw trimmer. Its table dimensions are 18 by 34 inches.

AN ALUMINUM galley one-third the weight of steel galleys has been announced by Graphic Arts Products, Incorporated, Detroit. Herman L. Lewis, Jr., head of the organization, said that the popular size 8¾ by 13 inches is ready for immediate delivery and other sizes are available. In addition to less weight, an advantage is that the nature of the alloy metal used makes the galley rust-proof.

NEW COLOR precision cameras have been announced by American Type Founders Corporation which are now being manufactured by ATF in its photo-mechanical division at Elizabeth, New Jersey. The cameras are of the darkroom type, all metal (steel and aluminum), and are primarily designed for lithographers, photoengravers, gravure printers, and others requiring the larger size cameras for color process work. Four sizes are being made. Numerous special features are listed in the description of the new ATF color precision cameras.

JIFFY TIE Manufacturing Company has announced production of its "Jiffy Form Tie," a device to tie up type forms by means of three strips of thin steel, almost type-high, bent at a 90 degree angle, attached to a high tension spring and a stout cord. Hooks are used to permit a quick but secure fastening of the cord after it has been passed around a type form. Al Westman, inventor of the type-form tie, said he got tired looking at compositors laboriously wrapping string around type-forms and receiving journeymen's wages while doing it. So he invented his gadget, and patented the device but was unable to get it into production because of manufacturing restrictions during the war. The inventor claims that the device will save 80 per cent of time usually spent in tying up forms with string.

THE TAKK Corporation, of Newark, Ohio, has announced a device designed to eliminate static from paper while in process of being printed. Electrically charged bars are made in sizes to fit printing presses, and are standard equipment supplied with the Miehle 61 and 76 offset presses. All electrical connections are concealed to prevent possibility of shock or reflex injury to workers around presses. Units are furnished with one, two, three, and four bars, either for AC or DC electric current sources. Installation mountings do not interfere with guides, grippers, or other devices. The TAKK bars are said to be equally effective on paper, cloth, cellophane, foil, or any other static producing material.

# The Month's News

Section devoted to timely items concerning men and events associated with printing. Copy must reach editor by twentieth of month preceding date of issue

### ASDEL SUCCEEDS RHAME

Fred B. Asdel, Jr., has been named manager of the New York agency of Mergenthaler Linotype Company to succeed Charles C. Rhame, effective October 1, according to an announcement from the company.

Mr. Asdel has been in the graphic arts for sixteen years, having served

CHARLES C. RHAME

FRED B. ASDEL

his apprenticeship in the composing room of *Trinidad* (Colorado) *Chronicle-News*. For several years he worked in newspaper offices in the western states, then became a member of the sales staff of the Pacific Coast agency of the Linotype company. He has been connected for some time with the executive sales department in Brooklyn.

Mr. Rhame, now sixty-seven years of age, is retiring from the active business life. He was for thirty-five years connected with the Linotype company, the last nineteen years as manager of the New York agency. He was eligible to retire three years ago but continued in active service because of war conditions, at the request of the company.

### MAKE ATF PRESSES OVERSEAS

Expansion of operations in Europe has been arranged by American Type Founders Sales Corporation by which Vickers-Armstrongs Limited in England will manufacture ATF's Little Giant automatic cylinder printing presses. This press handles sizes of of paper up to 12 by 18 inches. Earlier this year, Louis E. Pleninger, vice-president in charge of foreign sales for ATF, announced that Vickers-Armstrongs had begun manufacture in England of ATF's CE-Kelly presses which handle sheet sizes up to 18 by 24 inches.

The 18 by 24 Chief offset press owned by ATF is also being manufactured in Europe by AB Printing Equipment, Stockholm, Sweden.

### LAUNCH THIRTEENTH CONTEST

High schools and junior high schools will be given information concerning the thirteenth annual essay contest conducted jointly by the National Graphic Arts Education Association and the International Printing Ink Division of Interchemical Corporation. The topic is "Printing and Free Government," so Fred J. Hartman, educational director of the association, has announced. The first prize is $500, and thirty-three other cash prizes will be awarded. It is expected that 15,000 students will participate.

### PETITION REHEARING

The United States Department of Justice has filed a petition with the Supreme Court of the United States for a rehearing on "overtime-on-overtime." The Justice Department bases its petition upon its opinion that the recent decision of the Supreme Court is "not only erroneous but virtually impossible to apply to some industries." It is expected that the petition will be considered when the court convenes in October.

### EXPANDS FACILITIES

Pacific Press, Los Angeles, has completed its expansion program to the point where the printing of *Life* has been done to advance distribution dates in California to Friday. Formerly copies had been available the following Tuesday. This achievement became effective with the August 2 issue. The plant has been doubled in capacity to print the magazine and its print order now calls for all circulation in California, Oregon, Washington, Arizona, Nevada, Victoria, British Columbia, and Honolulu.

### ARRANGE CONVENTION

Top and junior executives are being urged to attend the sixteenth annual convention of the Book Manufacturers' Institute to be held in Washington, D. C., October 27 through 30. J. Raymond Tiffany, general counsel of the organization, has announced that "a very meaty business program is in preparation" and that much is to be reported by the research, labor relations, and book industry committees.

### DISTRIBUTE PAPER SAMPLES

Howard Paper Mills Incorporated has distributed through its Aetna Paper Company Division the first Correct Bond sample book since before the war. More than 15,000 copies have been distributed, each containing samples of all available standard weights in eight colors and white.

### REPORTS EARNINGS

Net earnings of Intertype Corporation for six months ended June 30 were $528,704.07, after deductions of $388,000 for taxes, and $30,000 set aside for contingencies.

### PRODUCES ART DIRECTORY

A directory of illustrators and advertising artists has been published in a plastic-bound book of 140 pages, by a co-operative arrangement of artists whose specimens are shown therein in the interests of all who are concerned with advertising, including printers and lithographers. All specimens are on pages 8½ by 11 inches in size, in black and white, processed by offset. In the preface, "Art Directory" is called "a new tool" for the art director and art buyer in selection of "artists who are specialists in every technique, point of view, and subject matter."

### PLAN ADVERTISING CAMPAIGN

A campaign directed to advertising men has been planned by the National Association of Printing Ink Makers which will feature the slogan: "Your Best Salesman—Printing Ink." Full pages in color will be run in advertising trade publications. The committee responsible for the campaign is made up of John Ellison, chairman; H. Bettye Stout, and George Welp, with David H. Sloane, secretary of the association, assisting the committee.

### IPI TO EXPAND FACILITIES

Plans have been made for the erection of a one-story building containing 158,868 square feet of floor space for use of the International Printing Ink Division of Interchemical Corporation on 12½ acres of the present 43 acres occupied by the firm at Elizabeth, New Jersey. The building, when erected, will be used for the production of printing inks, limited manufacture of ink varnishes, and as a central research laboratory for the ink division. The cost of the land and new steel and concrete building is estimated at about $1,600,000.

The project will be financed by the Mutual Life Insurance Company of New York on a basis that title to the property will be in its name and that the Interchemical Corporation will lease it for a term of twenty-five years with the option of renewal for five successive terms of ten years each.

### BEN WILEY

Ben Wiley, outstanding typographer, died suddenly in his home at Springfield, Illinois, on August 11. He had been in failing health for three years but had continued with his job at Frye Printing Company.

Born in 1889, in Chester, Illinois, he entered his apprenticeship in 1904 at Charleston. In 1930 he made his home at Springfield. He was a member of the International Association of Printing House Craftsmen, Springfield Typographical Union 177, and numerous civic and fraternal groups as well as a founder of the Typocrafters Club.

Mr. Wiley's work is well known to readers of THE INLAND PRINTER, much of it having been reproduced in these pages, and in seventy-five contests conducted by this magazine during the past sixteen years, he placed among the top ten winners. Recently a design of his won an award in England. A master craftsman, Wiley's work was distinguished by its simple dignity.

BEN WILEY

### APPOINTS WALTER McCAIN

John P. Smith Company, Rochester, New York, has appointed Walter L. McCain its Eastern sales director with headquarters in New York City. The company is observing the seventy-fifth anniversary of its beginning as a printing concern. Mr. McCain was editor of *Printing* magazine from 1917 to 1929, and more recently was general manager of U. S. Camera Publishing Company, with offices in New York City.

## ANSWERS
## IT'S A QUIZ

*Here are the answers to the quiz on page 32. How well did you remember the information which you have read from time to time in previous issues of this magazine or have seen elsewhere?*

1. **False.** For example, a 10-point face may appear on the same matrix with a 12-point face.
2. **e-9%,** a gain of 75 per cent over the 1935-1939 average.
3. **True.** Test a genuine dollar bill by rubbing it over a sheet of white paper.
4. Limitations in size of photoengraving equipment, and the higher cost of large engravings.
5. It will make the type heavier—thicker—than usual; the "punch" casts a shadow on the copyboard.
6. **False.** The usual hot-metal machine has 90 keys plus spaceband key; the Fotosetter has 114 keys plus space key.
7. **Larger;** that is, taller, actually by .002-inch, based on the lower-case o in the Intertype versions.

### HEARINGS ON "FREE" BOOKS

Hearings will be held by the Federal Trade Commission to decide whether the use of the word "free" in certain advertisements of a book club is misleading. The FTC's complaint against the publisher is that persons desiring "free" copies of books are obligated to join a book club and purchase at least four books a year. In answering the allegation, the publisher contends that the recipients of the advertised "free" book need not join the club but after joining they must purchase the required number of the books to retain membership.

### A. FORD DuBOIS

A. Ford DuBois, founder of DuBois Press, Rochester, New York, died July 13, after an illness of four years which required his retirement from active participation in the business. His son Robert assumed responsibility of managing the firm which specializes in the production of school year-books.

Mr. DuBois was born in 1881; he became a printers' devil at the age of sixteen; was editor of a country newspaper at twenty-one; became owner and publisher of the Newark *Union* at twenty-three, and for forty years thereafter was active in the printing business he founded.

### SALES SLOW IN BRITAIN

British printing equipment manufacturers report a slowing down of sales. While this is due to general tightening of cash it also marks the belief that prices have passed their peak. Printers are making their present equipment do rather than risking ordering machines that may prove, on delivery, to have been bought at an uneconomic price.

The situation has created other problems. Some manufacturers are reported to be selling direct rather than through agents. Export demands make so heavy a cut in production that the home user may be asked to wait two or three years for delivery.

Shortage of parts is a continuing difficulty which has serious results in British exports. American rebuilt equipment is sold in competition, with faster delivery, causing serious competition in markets formerly held by British concerns.

### EMPLOYE PUBLICATIONS ANALYZED

An analysis of contents of 399 employe publications made by the Metropolitan Life Insurance Company has been published in printed form, copies of which will be sent to firms requesting copies on their business stationery.

### RESUMES ADVERTISING JOB

B. W. Radcliffe has resumed his work as advertising manager of the Intertype Corporation after a two-year leave of absence. He is also director of typography and manager of the specimen printing department.

### DEMONSTRATIONS GIVEN

Demonstrations of Miehle presses equipped with new Dexter stream feeders are being given by staff members in various printing centers throughout the United States under direction of Carlton Mellick, vice-president of the Miehle Printing Press and Manufacturing Company, in charge of sales. In a letter to printers Mr. Mellick offers to arrange a demonstration visit to nearby installations.

### AWARDED TROPHY FOR FILM

The American Public Relations Association has awarded a trophy to Harris-Seybold Company, Cleveland, for its motion picture "How to Make a Good Impression," and for "the most effective use of motion pictures and visual aids in its public relations program." The film has been shown 600 times to about 65,000 buyers of printing, according to a report of the Harris-Seybold Company. Its original showing was at the 1946 convention of the National Association of Photo-Lithographers at Washington, D. C. The firm is currently working on another promotion film which is to make its appearance later this year.

### OPENS CHICAGO OFFICE

Pacific Press, Incorporated, which has headquarters in Los Angeles, has opened a Chicago office "as a further step in providing West Coast printing service for manufacturers, mail-order houses, and publishers who have headquarters in the Midwest and East," according to an announcement by W. B. Clum, president of the firm.

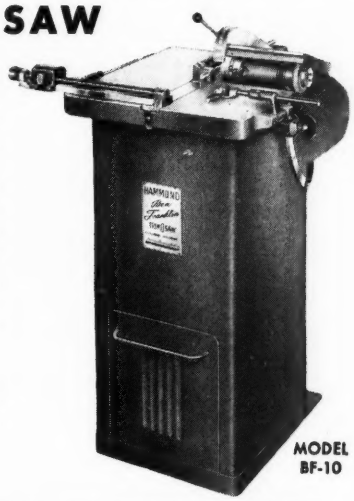

TRIMOSAW
Ben Franklin

A LOW PRICE SAW BY HAMMOND!

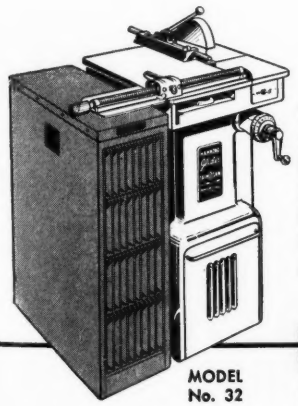
"Finest quality saw in the low price field" — the HAMMOND BEN FRANKLIN TRIMOSAW. The Ben Franklin name indicates economy and the TrimOsaw name indicates quality. This machine is part of the quality TrimOsaw line and is priced at the lowest figure at which we know from our experience it is possible to make a quality saw.

The BEN FRANKLIN has full range capacity — it will handle from the smallest work to full-page newspaper plates.

It is the ideal combination of capacity, accuracy and low price for the smaller commercial plant and the weekly newspaper.



MODEL BF-10



MODEL No. 32

STRIP MATERIAL CABINET for TRIMOSAWS

TrimOsaw users and users of other makes of saw trimmers can save time and trouble by storing strip material right alongside their saws with a Hammond Strip Material Cabinet. The dimensions are 12½" wide, 34½" high and 24½" deep. Write for complete information, there's no obligation.

Hammond Machinery Builders INC.

1616 DOUGLAS AVE. • KALAMAZOO, MICHIGAN


### ISSUES UNUSUAL REPORT

An annual report of ATF Incorporated for the year ended March 31, 1948 combines cartoon illustrations, financial and production statistics, a cut-out "pop-up" illustration in the middle spread of the 24-page and cover book, and affixed to the front inside cover is a phonograph record made by Thomas Roy Jones, president of the company, in which the report is reproduced, to be heard by stockholders and employes if placed on a phonograph.

"It is believed this is the first time an American industry has used this novel means of communicating economic facts to its people," is the comment made by spokesmen of the ATF.

The holding company of the assets of all operating companies is called ATF Incorporated, and subsidiaries in the printing industry are American Type Founders, Incorporated; Webendorfer Division, and American Type Founders Sales Corporation. The four ATF subsidiaries are Daystrom Laminates, Incorporated; Frederick Hart & Company, Daystrom Corporation, and Friendship Division.

Net profit of the entire operation of ATF for 1947-1948 was $2,614,697 or $4.60 a share, compared with net of $913,675, or $1.61 a share for the previous year. Net sales for 1947-1948 aggregated $36,870,914, compared with $26,458,736 for the previous year.

Comparisons of statistics are shown in drawings, as are manufacturing operations, sales efforts, shipments, and activities of subsidiaries.

A number of pages are devoted to cartoons illustrating what happens to every ATF dollar. Mr. ATF Dollar visits homes of employes and stockholders on Main Street, and tells them that last year he had an income of $37,233,000. He takes just one dollar from the pile and explains that he spent 39.1 cents for raw materials; 12.2 cents for operating expenses; 5.7 cents for taxes; 2.4 cents for wear and tear; paid employes, 33.0 cents; paid officers of all companies, 1.4 cents; paid stockholders, 1.5 cents; and retained 4.7 cents "for growth and to create more jobs."

Mr. ATF Dollar concludes his talk by gathering stockholders, customers, and employes in meeting assembled, and orates to them: "When we all do our part we are a winning team."

The ATF "Creed" concerning its management-labor policies is printed on the back page of the illustrated annual report.

### SUCCEEDS JAMES F. NEWCOMB

Charles E. Albers has been elected president of James F. Newcomb Company, New York City, succeeding the late James H. Newcomb, who also was the president of the Printing Industry of America, Incorporated. Mr. Albers was general manager of the company for twelve years preceding the death of Mr. Newcomb.

### PRINTERS PLAN SHOW

Plans are being made by the Associated Printers and Lithographers of St. Louis, Incorporated, for an exhibition of printing to be held in the new auditorium of Stix, Baer & Fuller Department Store, October 28 through November 3. The exhibition will be featured by a banquet on the opening night to which 500 civic and business leaders of the city are to be invited as guests of the association. After the banquet, the guests will be shown the exhibit, which is being advertised as "St. Louis Printing on Parade."

The first day of the "Parade" will be devoted to awarding prizes to local printers for outstanding craftsmanship in thirty-one classifications, such as catalogs, posters, broadsides, letterheads, and other items. The exhibit will be built around historic, educational, and audience participation features and will be patterned after the exhibit of 1944 which was advertised as "The Cavalcade of Printing." For promotion purposes, each day will be set aside for some special event. Don O. Pyke is chairman of the association's committee of arrangements.

### DISCUSSES RUBBER PLATES

J. E. Thomas, manager of the printing materials division, B. F. Goodrich Company, Akron, Ohio, in a statement concerning rubber printing plates, said that their increased use since the close of the recent war "is one of the outstanding developments in the printing industry." He said that the boxboard industry now uses rubber plates almost exclusively because they conform better to uneven surfaces, and they are also used for printing food wrappers, Christmas and other holiday packaging materials, posters, brochures, cloth and paper bags, and some books.

"The growing popularity of the plates makes rubber a serious competitor of metals in the printing field," said Mr. Thomas. "American industry first introduced rubber plates about 1930, but their greatest boom has come since the end of the war. The main reason for this is that they reduce printing costs; they give longer runs at faster press speeds; use one-third less ink; cut makeready time by two-thirds; cause less wear on printing equipment; and improve the appearance of printed matter."

### NAPL CONVENTION

Fifty-eight booths of exhibits will be featured at an equipment show to be held in connection with the sixteenth annual convention of the National Association of Photo-Lithographers at Cincinnati, September 15 to 18. Talks to be given during the four days will be on labor relations as they apply to the industry, costs, air-conditioning, aptitude tests, art and copy preparation, new processes, plant production, and personnel relations, in addition to equipment for special purposes. One session will feature a shop quiz program in which representative men will answer technical questions put to them by the audience.

### PLAN SERIES OF LECTURES

A series of lectures designed to aid printing apprentices to appreciate the importance of printing in serving humanity has been prepared by the management of the Apprenticeship Commission of the Printing Trades of the City of Montreal, and will be delivered to students in the School of Graphic Arts operated in that city by the government in co-operation with the industry. The lectures are to be given to the apprentices on Saturday forenoons and are patterned after a similar series given during the previous school year.

### DEMONSTRATE PROOF PRESS

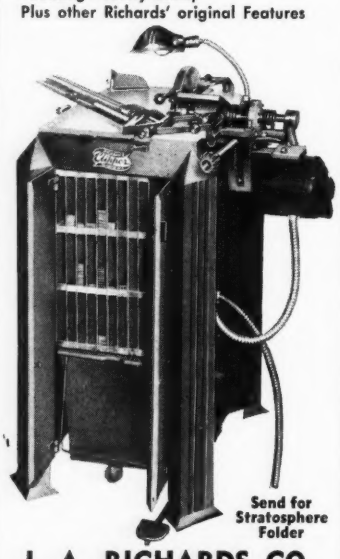
Vandercook and Sons, Incorporated, introduced its new 22-34 offset proof press to the trade by means of a daily demonstation at its downtown display room in Chicago. E. O. Vandercook, president of the firm, said that the exhibition of the new press was scheduled to run through August 31.

The proof press is power driven with a speed which can be regulated from 7 seconds to 20 seconds for a complete cycle. Both inking and the dampening units can be changed with ease, and a hand wheel and gauge provide means of adjusting the impression.


**RICHARDS' "Clipper"**

***FIRST—***

Rolling Table Saw—*Built in* Storage
Automatic Foot Switch
Instant change Saw to Saw Trim (PAT.)
152 Pica Gauge—Two Sizes of Tables
"Bulldog" Safety Clamp
Plus other Richards' original Features



Send for Stratosphere Folder

**J. A. RICHARDS CO.**

*The First In* KALAMAZOO, MICH.
903 N. PITCHER ST.


### ASKS PRINTERS TO HELP

Lee Augustine, Cincinnati, is chairman of a national committee soliciting gifts for needy printers, lithographers, and their families in fifteen war-torn European countries. He announced members of the relief committee as follows: Donald L. Boyd, Huntington, West Virginia; John M. Callahan, Cincinnati; John J. Deviny, Washington, D. C.; Alex Dittler, Atlanta; A. E. Giegengack, New York City; Clarence A. Groettum, Minneapolis; Fred W. Hoch, New York City; Gordon J. Holmquist, Los Angeles; Frank McCaffrey, Seattle; L. A. Neumann, Chicago; A. Gordon Ruiter, Boston; A. R. Tommasini, Berkeley; and Perry R. Long, Los Angeles.

Mr. Augustine has sent gift packages, personally, to printers and lithographers abroad for several years and has been impressed by the letters of gratitude which "indicated the scope of the hardships that exist in the aftermath of the war." He has announced that "the mechanics of handling contributions have been greatly simplified by the arrangements the committee has been able to make with CARE." His directions for making contributions follow: "Make your check payable to CARE for any amount. Attach your letterhead or business card. Send to Printers' and Lithographers' International Relief Committee, P. O. Box 1422, Cincinnati 1, Ohio."

### PRINTER BUILDS PRESS

Arthur J. Gavrin, president of Arthur J. Gavrin Press, Incorporated, New Rochelle, New York, required a special press for production work and decided to have one designed and built in his own print shop. The result is a four-color rotary press, with a 17-inch cylinder, two numbering units, one of which will number on the face and the other on the back of the piece to be printed; combined with mechanisms to carbonize and interleave "snapeasy" forms.

### INCREASES METAL PRODUCTION

Federated Metals division of American Smelting and Refining Company has put into operation its enlarged plant at Houston, Texas, where it recently purchased twenty-two acres of land for expansion purposes. Type metals are among the products to be produced there, so J. J. Harutun, manager of operations in that city, has announced.

### CHAMPION PUBLISHES BOOK

Because annual reports issued by companies to the stockholders and employes have become so specialized, the Champion Paper and Fibre Company, Hamilton, Ohio, has published a treatise on the subject for the guidance of those interested. The book is 64 pages and cover, 8½ by 11 inches in size, illustrated by pictures and graphs, and contains "check lists" for stockholders

reports and for employe reports. The check-list for stockholders reports contains 115 items to be considered in producing such reports, and the employes list contains eight suggestions under the heading "General Information"; forty-six items under "The Company," and seventeen items listed as "Employe Benefits."

F. C. Gerhart, advertising manager of Champion, said that the book, prepared by K. C. Pratt, editor of *Stet*, house magazine of the company, "is the third volume of the Stet Library of Editorial Aids, and is available for free distribution to persons interested in the theory and practice of corporate reporting."

# COSTS AND LABOR PROBLEMS ARE DISCUSSED AT CONVENTION OF NATIONAL LITHOGRAPHERS

● HISTORY of sixty years of trade association activities in the lithographic industry was reviewed and current problems were discussed at the forty-third annual convention of the Lithographers National Association at White Sulphur Springs, West Virginia, July 21 to 24.

Officers who had served during the past year were re-elected as follows: president, George W. Hall, Western Lithograph Company, of Los Angeles; vice-president, Randolph T. Ode, Providence Lithograph Company, Providence; treasurer, George C. Kindred, Kindred, MacLean & Company, Long Island City; executive director, W. Floyd Maxwell, and Edward D. Morris, secretary, with headquarters in New York City.

Twenty-five directors were elected in accordance with provisions in the revised constitution, five being elected for each of five classes to serve from one to five years. Beginning with next year, five new directors will be elected at each annual convention for five year terms after which they will not be eligible for re-election if they have served for five successive years. Provision is made for the serving of other terms after a lapse of time.

Riverside, California, was selected as the place of the 1949 convention of the association, May 8 to 16.

Subjects discussed by the lithographers during the convention included relationships with the labor unions with emphasis upon working out the Taft-Hartley law, as it affected employers. The welfare, health, and insurance provisions in labor contracts recently signed in New York, Chicago, Cincinnati, and Detroit were discussed along with training of apprentices and other items. No recommendations were formulated to be submitted to members of the association since labor policies are left to each firm to be worked out according to individual requirements.

Hourly cost rates and other operational factors were presented to the convention as a result of a survey conducted by the association concerning work done during 1947. Another survey presented covered the lithographic press capacity of the entire membership and its relationship with groups of lithographic products.

Considering the current kinds of production of the lithographers the statement was made that survey of the membership's output shows that 46 per cent of the members depend upon direct advertising—folders, broadsides, booklets, point-of-sale items—as their primary or secondary sources of income. Seventy per cent of the members do this type of work. Dealer helps and displays are second in importance; stationery items and commercial work, third; packaging materials are fourth; and bank stationery, fifth.

In its historical review, reference was made to the formation of the first trade association, the National Lithographers Association, in Buffalo on October 5, 1888. Another important date mentioned was 1923, at which time the convention in session at White Sulphur Springs took the action which resulted in the formation of the Lithographic Technical Foundation; and the raising, in 1925, of its initial endowment.


INK TROUBLES VANISH . . .

WHEN YOU USE "33" INK CONDITIONER

"It makes all ink better"

Here's Why:

- It increases the affinity of ink to paper under all conditions of humidity, age, stock and press conditions.
- The purging action of "33" keeps halftones clean, sharp and open.
- It's unexcelled with gloss inks and overprint varnish—preventing too rapid drying on the press.
- "33" aids trapping of process and label inks in multi-color printing.
- In rubber plate printing, it assures sharp impressions without squeeze.
- Repels moisture and stickiness . . . prolongs roller life.

8-LB. TRIAL ORDER

See your local dealer or jobber—or write direct for an 8-lb. trial can. If "33" fails to give complete satisfaction, return the unused portion at our expense. Specify "33" for letterpress and "O-33" for litho and multilith.

100% GUARANTEE

Ask for a free copy of "TO THE PRESSMAN" which lists all the features and advantages of "33" Ink Conditioners for letterpress and offset printing.

**Territories for Distributors**

Re-alignment of territories has created a few openings for dealers and jobbers. Write for full details of our liberal proposition. *Once sold, "33" is always used.* GET THE FACTS NOW!

Contains HYPOTHIOLATE

Central COMPOUNDING COMPANY

1718 North Damen Avenue, Chicago 47, Illinois

IN CANADA—it's CANADIAN FINE COLOR CO., LTD., TORONTO

Export Division: Guiterman Co., Inc., 35 South William Street, New York 4, N. Y.

## ITCA PLANS CONVENTION

Damage done to the printing industry and particularly to trade composition houses in Chicago, Philadelphia, New York, and other cities by labor difficulties will be discussed by the International Typographic Composition Association at its forthcoming twenty-ninth annual convention to be held in Minneapolis, September 16 to 18. It is probable that some action will be taken recommending that for the good of the industry, the International Typographical Union should provide assurance that future disputes which cannot be settled by agreement should be arbitrated in accordance with the pattern furnished by the International Printing Pressmen's Union and the Printing Industry of America, Incorporated, which recently signed a national agreement to prevent strikes for five years.

In connection with the three-day convention, an exhibit will be shown of Vari-Typers, Lithotype machines, the Justowriter, besides printed products, matrices, and films of Intertype's Fotosetter. In announcing these exhibits, Frank M. Sherman, executive director of the association, said that "these exhibits are being made on invitation only and the demonstrations are for the purpose of enabling ITCA members to inform themselves on the various machines and processes which they will likely adopt for their own use or meet in competition for business."

One of the subjects to be discussed at the convention is the composite statement of 1947 business done in the trade composition houses based upon compilation of figures received from more than forty houses. Trade customs will be considered in the light of recent developments in the industry, and other problems faced by members will be discussed by speakers and in open forums.

## MORRIS FULLER BENTON

Morris Fuller Benton, who in his own right became a famed type designer connected with the American Type Founders Incorporated, and who was the son of the late Linn Boyd Benton whose punch- and matrix-cutting machines revolutionized foundry type production, died in Morristown, New Jersey, June 30. He was seventy-five years of age, having been born in Milwaukee in 1873.

Following his graduation as a mechanical engineer from Cornell University in 1896, he became an assistant to his father who assigned him to the job of standardizing the many faces and families of type inherited from the twenty-three different type founders which had been merged in 1893 into the American Type Founders Company. The first type design young Benton expanded into a family was Cheltenham. Other outstanding families of type which he developed are Cloister Old Style and Century School Book.


*Levelcoat** PRINTING PAPERS

A PRODUCT OF Kimberly Clark RESEARCH

*Distributed by*

**ALABAMA**
Birmingham — Sloan Paper Company

**ARIZONA**
Phoenix — Zellerbach Paper Company

**ARKANSAS**
Little Rock — Arkansas Paper Company

**CALIFORNIA**
Eureka — Zellerbach Paper Company
Fresno — Zellerbach Paper Company
Los Angeles — Zellerbach Paper Company
Oakland — Zellerbach Paper Company
Redding — Zellerbach Paper Company
Sacramento — Zellerbach Paper Company
San Diego — Zellerbach Paper Company
San Francisco — Zellerbach Paper Company
San Jose — Zellerbach Paper Company
Stockton — Zellerbach Paper Company

**COLORADO**
Denver — Carpenter Paper Company
Pueblo — Carpenter Paper Company

**CONNECTICUT**
Hartford — The Rourke-Eno Paper Co., Inc.
West Haven — Bulkley, Dunton & Co., Inc.

**DISTRICT OF COLUMBIA**
Washington — The Barton, Duer & Koch Paper Co.

**FLORIDA**
Jacksonville — Knight Brothers Paper Company
Miami — Knight Brothers Paper Company
Orlando — Knight Brothers Paper Company
Tallahassee — Knight Brothers Paper Company
Tampa — Knight Brothers Paper Company

**GEORGIA**
Atlanta — Sloan Paper Company

**IDAHO**
Boise — Zellerbach Paper Company

**ILLINOIS**
Chicago — Berkshire Papers, Inc.
Chicago — Chicago Paper Company
Chicago — Midland Paper Company

**INDIANA**
Indianapolis — Crescent Paper Company

**IOWA**
Des Moines — Carpenter Paper Company
Sioux City — Carpenter Paper Company

**KANSAS**
Topeka — Carpenter Paper Company
Wichita — Western Newspaper Union

**KENTUCKY**
Louisville — The Chatfield Paper Corp.

**LOUISIANA**
Baton Rouge — Louisiana Paper Co., Ltd.
New Orleans — The D and W Paper Co.
Shreveport — Louisiana Paper Co., Ltd.

**MAINE**
Augusta — Carter, Rice & Company Corp.

**MARYLAND**
Baltimore — Baltimore Paper Company, Inc.

**MASSACHUSETTS**
Boston — Carter, Rice & Company Corp.
Springfield — Bulkley, Dunton & Co.
Worcester — Charles A. Esty Paper Company

**MICHIGAN**
Detroit — Seaman-Patrick Paper Co.
Grand Rapids — Carpenter Paper Company

**MINNESOTA**
Minneapolis — Carpenter Paper Company
St. Paul — Carpenter Paper Company

**MISSISSIPPI**
Jackson — Jackson Paper Company
Meridian — Newell Paper Company

**MISSOURI**
Kansas City — Carpenter Paper Company
St. Louis — Beacon Paper Company
St. Louis — Shaughnessy-Kniep-Hawe Paper Co.
St. Louis — Tobey Fine Papers, Inc.

**MONTANA**
Billings — Carpenter Paper Company
Butte — Carpenter Paper Company
Great Falls — Carpenter Paper Company
Missoula — Carpenter Paper Company

**NEBRASKA**
Lincoln — Carpenter Paper Company
Omaha — Carpenter Paper Company

**NEVADA**
Reno — Zellerbach Paper Company

**NEW JERSEY**
Newark — J. E. Linde Paper Company

**NEW MEXICO**
Albuquerque — Carpenter Paper Company

**NEW YORK**
Albany — Hudson Valley Paper Company
Brooklyn — A. Price & Son, Inc.
Buffalo — Hubbs & Howe Company
New York — Baldwin Paper Company, Inc.
New York — Bulkley, Dunton & Co., Inc.
New York — The Canfield Paper Co.
New York — Forest Paper Company, Inc.
New York — J. E. Linde Paper Company
New York — A. Price & Son, Inc.
New York — Royal Paper Corporation
Rochester — Paper Service, Inc.
Syracuse — Paper Service, Inc.
Troy — Troy Paper Corporation

**NORTH CAROLINA**
Charlotte — Dillard Paper Company, Inc.
Greensboro — Dillard Paper Company, Inc.

**NORTH DAKOTA**
Fargo — Western Newspaper Union

**OHIO**
Cincinnati — The Chatfield Paper Corporation
Cleveland — The Petrequin Paper Company
Columbus — The Scioto Paper Company
Toledo — The Ohio & Michigan Paper Co.

**OKLAHOMA**
Oklahoma City — Carpenter Paper Company
Tulsa — Tayloe Paper Company of Oklahoma

**OREGON**
Eugene — Zellerbach Paper Company
Portland — Zellerbach Paper Company

**PENNSYLVANIA**
Philadelphia — Paper Merchants, Inc.
Philadelphia — D. L. Ward Company
Pittsburgh — The Chatfield & Woods Co. of Pa.

**RHODE ISLAND**
Providence — Carter, Rice & Company Corp

**SOUTH CAROLINA**
Greenville — Dillard Paper Company, Inc.

**TENNESSEE**
Chattanooga — Bond-Sanders Paper Co.
Knoxville — Southern Paper Company, Inc.
Memphis — Tayloe Paper Company
Nashville — Bond-Saunders Paper Co.

**TEXAS**
Austin — Carpenter Paper Company
Dallas — Carpenter Paper Company
Fort Worth — Carpenter Paper Company
Harlingen — Carpenter Paper Company
Houston — Carpenter Paper Company
Lubbock — Carpenter Paper Company
San Antonio — Carpenter Paper Company

**UTAH**
Salt Lake City — Zellerbach Paper Company

**VIRGINIA**
Richmond — Cauthorne Paper Company

**WASHINGTON**
Seattle — Zellerbach Paper Company
Spokane — Zellerbach Paper Company
Walla Walla — Zellerbach Paper Company
Yakima — Zellerbach Paper Company

**WISCONSIN**
Milwaukee — The Bouer Paper Company

**EXPORT AGENTS**
American Paper Exports, Inc., New York, U. S. A.
Cable Address: APEXINC—New York

**KIMBERLY-CLARK CORPORATION · NEENAH, WISCONSIN**

122 East 42nd Street, NEW YORK 17
155 Sansome Street, SAN FRANCISCO 4
8 South Michigan Avenue, CHICAGO 3
22 Marietta Street, N. W., ATLANTA 3

*TRADEMARK

## Before choosing any printing paper...

# *Look at Levelcoat**

Sunshine Ensembles
BY LLANI
She's suited to the sun—and to the sea—in this ensemble of many moods. Demure, in the wrap-around skirt and beach shawl blouse. Dashing, when skirt becomes sophisticated cape. Dramatic, in the simple swim suit of matching shorts and bra!

Illustrated here is a typical use of Levelcoat*, not an actual booklet

### Look at Levelcoat... for brightness

When it's sparkle you want, choose a Levelcoat* printing paper! You'll find it a dramatic backdrop for type and illustration. You'll see color glow and blacks contrast sharply—on a paper now brighter than ever before.

### Look at Levelcoat... for smoothness

Compare Levelcoat grade for grade with any other coated paper. See for yourself the smooth result of careful clay selection, of controlled precision coating. You'll agree it pays to give your printing the Levelcoat lift!

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IT PAYS TO LOOK AT LEVELCOAT

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A PRODUCT OF Kimberly Clark

*Levelcoat* printing papers are made in these grades: Trufect†, Kimfect†, Multifect† and Rotofect†.*

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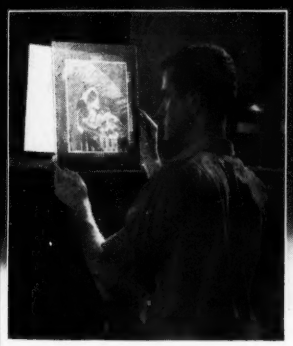

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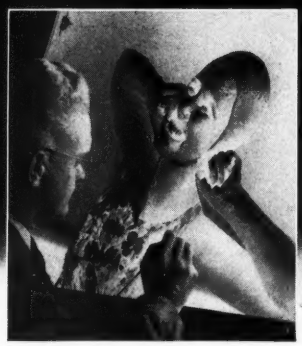

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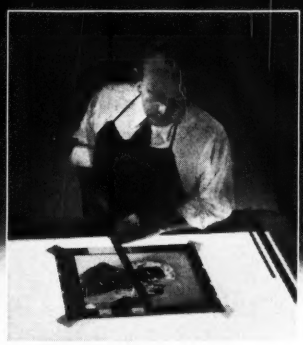

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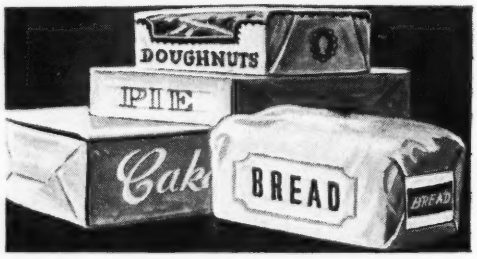


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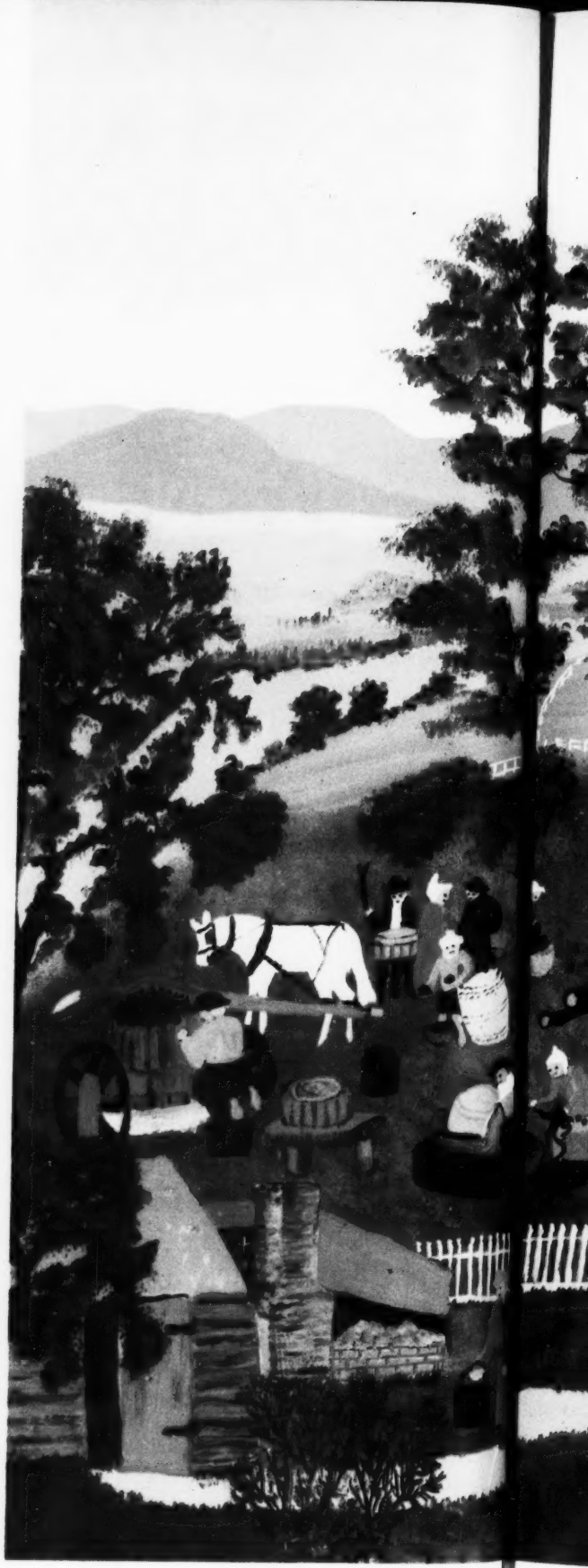
### Cover artist

Grandma Moses (Anna Mary Robertson Moses) was born on a farm in Washington County, New York, September 7, 1860. A primitive artist, she began painting about ten years ago the pictures which have since been bought by museums and important private collectors. She was discovered by an art collector who saw her paintings in a drug store window near her home in Hoosick Falls, New York. Her first one-man show was held in November 1940 at the St. Etienne Gallery. Grandma Moses' paintings are typical of America and especially of the part of the country in which she lives but they are not "done from nature." She transmutes into pictures scenes she has experienced, landscapes familiar to her and memories of her youth.



**West Virginia Pulp and Paper Company**

230 Park Avenue, New York 17
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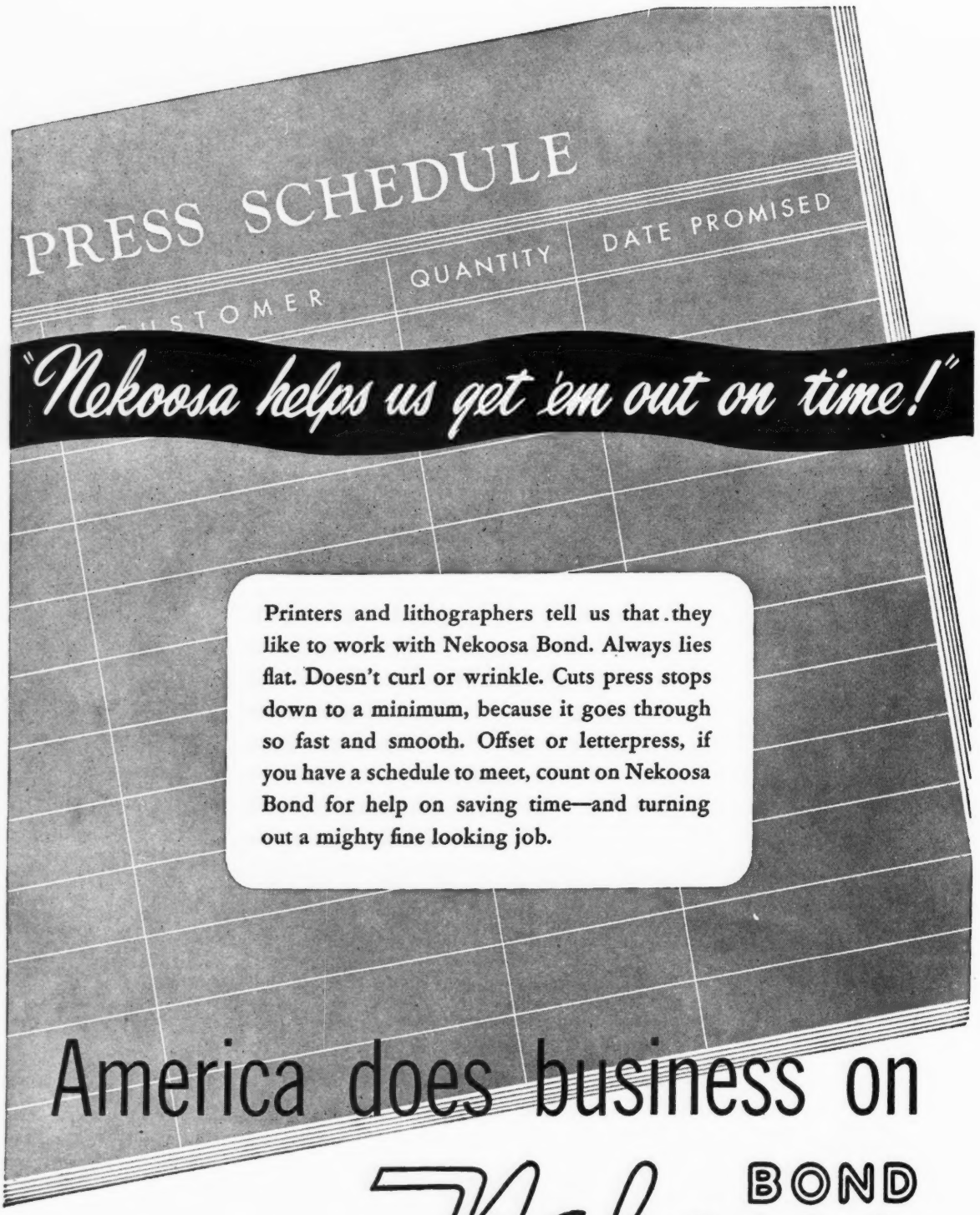
Apple Butter Making, by Grandma Moses. From the St. Etienne Gallery, New York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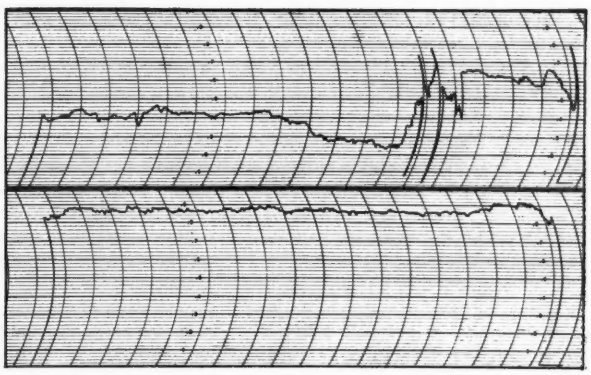
The bottom graph shows fluctuations in the visible light energy during a four minute operation with the Grafarc.



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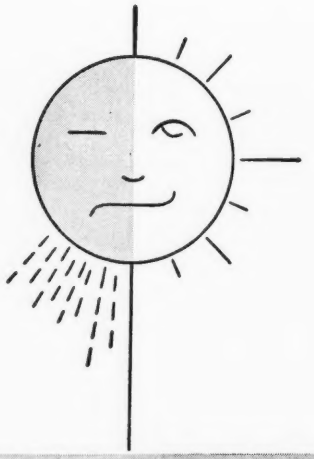

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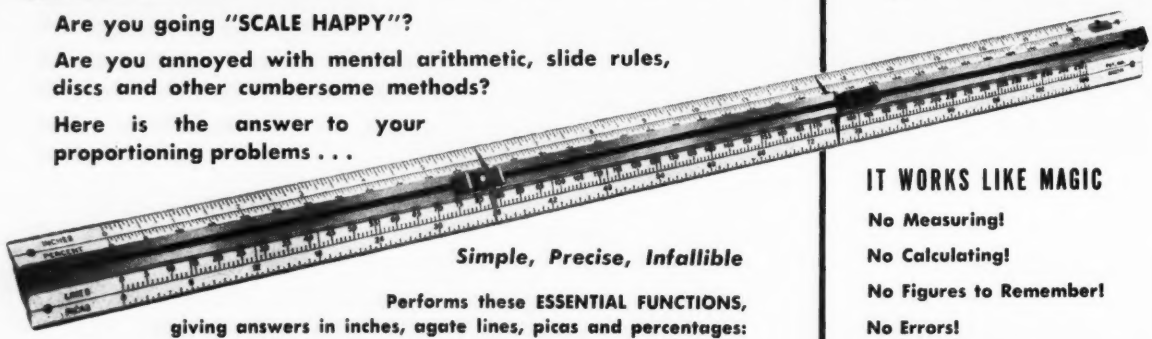

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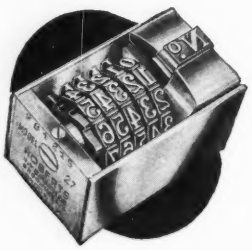

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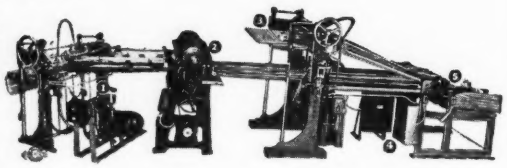

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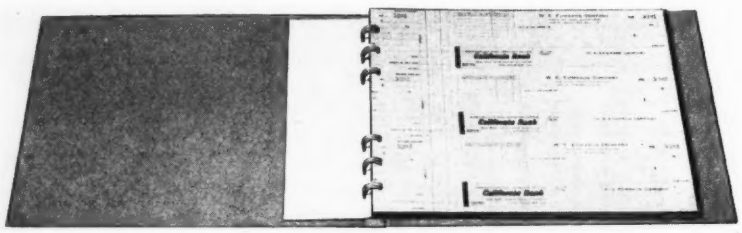

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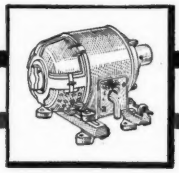

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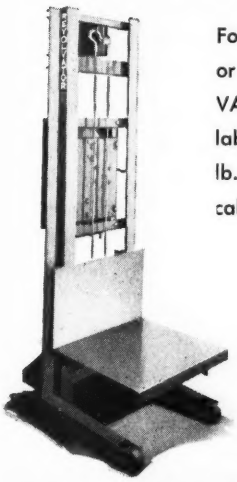

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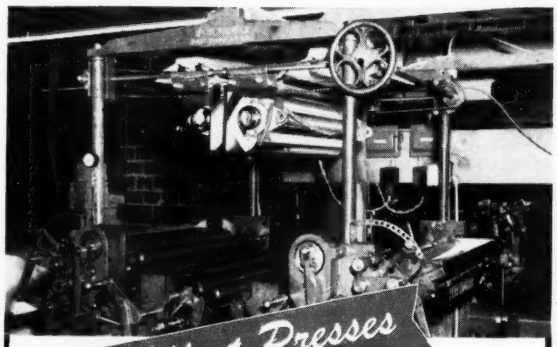

*For Offset Presses*

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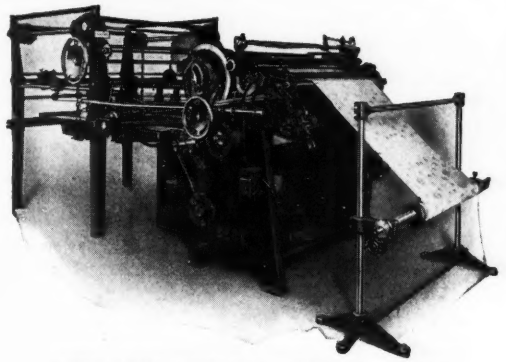

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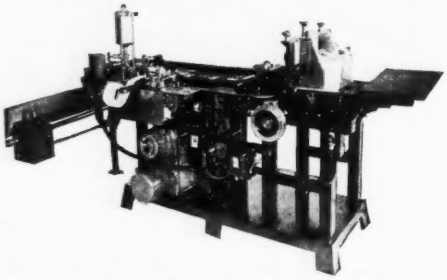

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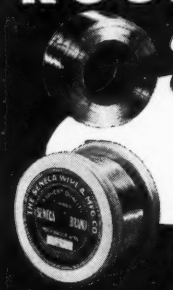

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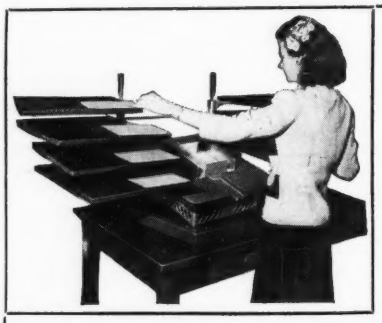

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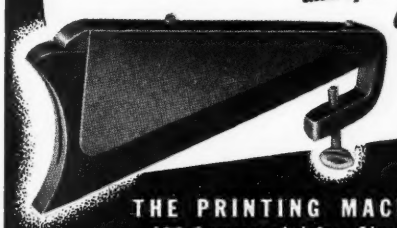

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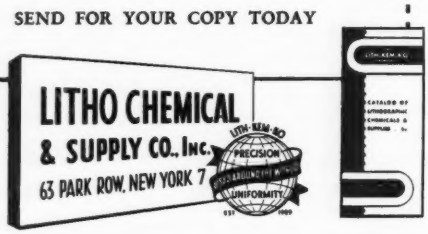


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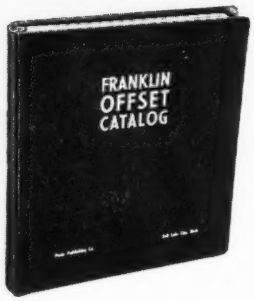


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Volume 121 ★ August, 1948 ★ Number 5

**Published Monthly by Maclean-Hunter Publishing Corporation**

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**THE INLAND PRINTER furnishes the most reliable and significant information on matters concerning the printing and allied industries. Contributions are solicited but should be concisely stated and presented in typewritten manuscript.**

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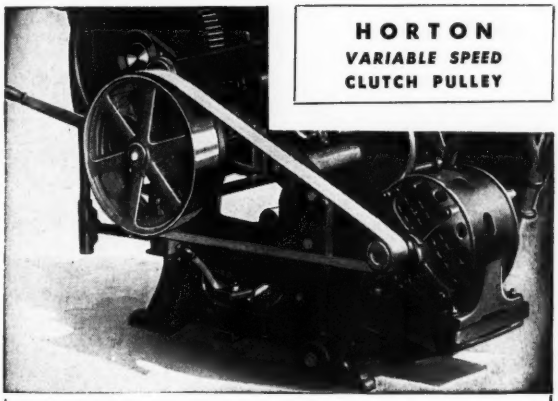

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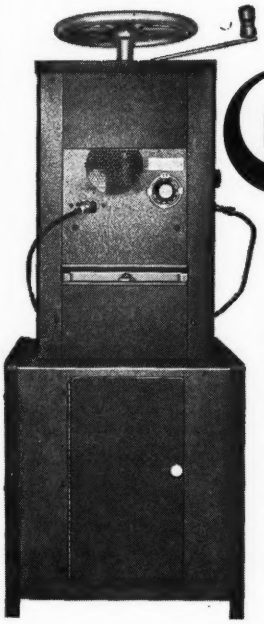

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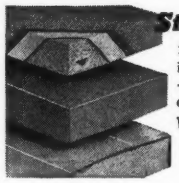

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INDEX TO DISPLAY

## ADVERTISERS

IN THIS ISSUE


Accurate Steel Rule Die Mfgrs. . . . . 6
Acme Type Foundry . . . . . 95
Aigner, G. J., Co. . . . . 86
Aljen Associates . . . . . 95
American Roller Co. . . . . 92
American Steel Chase Co. . . . . 88
American Type Founders . . . . . 83
American Type Founders Sales Corp. . . 16
Aronsson Printing Co. . . . . 84

Baltimore Type . . . . . 88
Barger Box Co. . . . . 94
Baum, Russell Ernest . . . . . 93
Beck, Charles, Machine Corp. . . . . 87
Beckett Paper Co. . . . . 23
Brock & Rankin . . . . . 86
Burrage Glue Co. . . . . 88

Central Compounding Co. . . . . 71
Challenge Machinery Co. . . . . 24
Cheshire Mailing Machines, Inc. . . . . 88
Collins, A. M., Mfg. Co. . . . . 93
Consolidated Water Power & Paper Co. . . 21
Cottrell, C. B., & Sons Co. . . . . 13
Cromwell Paper Co. . . . Inside Back Cover

Dayton Rubber Co. . . . . 7
Detroit Sulphite Pulp & Paper Co. . . . 85
Dexter Folder Co. . . . . 8
Doyle, J. E., Co. . . . . 87

Eastern Corp. . . . . 15
Eastman Kodak Co. . . . . 75
Elco Typographic Service . . . . . 95
Electric Boat Co. . . . . 11
Empco Mfg. Co. . . . . 82
Engdahl Bindery . . . . . 92

Falulah Paper Co. . . . Inside Front Cover
Flex-O-Coil Sales Co. . . . . 86
Fox River Paper Corp. . . . . 90

Gaetjens, Berger & Wirth, Inc. . . . . 88
Graphic Arts Corp. of Ohio . . . . . 90

Hammermill Paper Co. . . . . 19
Hammond Machinery Builders . . . . 70
Haney, O. C., Co. . . . . 91
Harris-Seybold Co. . . . . 9
Henschel, C. B., Mfg. Co. . . . . 92
Holyoke Card & Paper Co. . . . . 93
Horton Mfg. Co. . . . . 91

International Paper Co. . . . . 76
Intertype . . . . . Back Cover

Johnson, Chas. Eneu & Co. . . . . 82
Jones, James H., Co. . . . . 91

Kimberly-Clark Corp. . . . . 72, 73
Kimble Electric Co. . . . . 87

Lake Erie Engineering Corp. . . . . 4
L. A. Type & Rule Co. . . . . 89
Lawson, E. P., Co. . . . . 12
Linotype Supply Co. . . . . 90
Litho Chemical & Supply Co., Inc. . . . 90
Ludlow Typograph Co. . . . . 1

McAdams, John, & Sons, Inc. . . . . 86
Megill, Edward L., Co. . . . . 94
Mergenthaler Linotype Co. . . . . 25
Miehle Printing Press & Mfg. Co. . . . 3
Mead Sales Co. . . . . 4, 5
Miller Printing Machinery Co. . . . . 88
Morgans & Wilcox Mfg. Co. . . . . 89

Nekoosa-Edwards Paper Co. . . . . 80
Northern Machine Works . . . . . 94
Northwest Paper Co. . . . . 17, 18

Old Colony Envelope Co. . . . . 22
Oxford Paper Co. . . . . 10

Payne & Craig Corp. . . . . 94
Porte Publishing Co. . . . . 90
Printing Machinery Co. . . . . 89

Rathbun & Bird Co., Inc. . . . . 84
Reliance Electric & Engineering Co. . . . 20
Revolator Co. . . . . 87
Richards, J. A. Co. . . . . 72
Roberts Numbering Machine Co. . . . . 84
Rosback, F. P., Co. . . . . 90
Rouse, H. B., & Co. . . . . 88

Scott, Asa D., Industries . . . . . 95
Scott, Walter, & Co., Inc. . . . . 88
Siebold, J. H., & G. B., Inc. . . . . 77
Seneca Wire & Mfg. Co. . . . . 88
Shinn, Cobb . . . . . 95
Shulman, Ben . . . . . 94
Sinclair & Valentine Co. . . . . 84
Smith, R. K. . . . . 91
Southworth Machine Co. . . . . 14
Spero, J., & Co. . . . . 93
Strathmore Paper Co. . . . . 74
Strong Electric Corp. . . . . 81
Syntron Co. . . . . 8

Ti-Pi Co. . . . . 95
Tompkins Printing Co. of Chicago . . . 94
Type & Press of Illinois, Inc. . . . . 92

Universal Jogger Co., Inc. . . . . 88

Vandercook & Sons, Inc. . . . . 92

Weston, Byron, Co. . . . . 2
Western Newspaper Union . . . . . 88
West Virginia Pulp & Paper Co. . . . 78, 79



# The Inland Printer

Leading Business and Technical Journal in the Printing and Allied Industries

VOLUME 121 • AUGUST, 1948 • NUMBER 5


## Leading Articles for You This Month


PAGE

Profit-Sharing Imperiled by Court Rulings *By Nathan C. Rockwood* 27

Hand Composition System Designed to Meet Drastic Changes in Requirements . . . . . *By Robert H. Roy* 29

"Why I Like the Printing Business" . *By George MacCrae Hendry* 33

Magnesium Playing Increasingly Important Role in Graphic Arts *By June Walraven* 34

A Three-Star Second Color . . . . . *By Glenn J. Church* 43

Typical Fluorescent Lighting System for a Printing Plant *By Walter S. Greenwood* 52

Craftsmen Hold Twenty-ninth Convention . . . . . 54

Here are the Answers to Some Troubling Questions Encountered in Cost Accounting . . . . . *By A. C. Kiechlin* 59


## —all that plus these regular features


Books for the Printer . . . 64
Letters to the Editor . . . 62
Offset Department . . . . 39
Pressroom . . . . . 45
Salesman's Corner . . . . 48
The Month's News . . . . 67
Typographic Clinic . . . 57
What's New . . . . . 65



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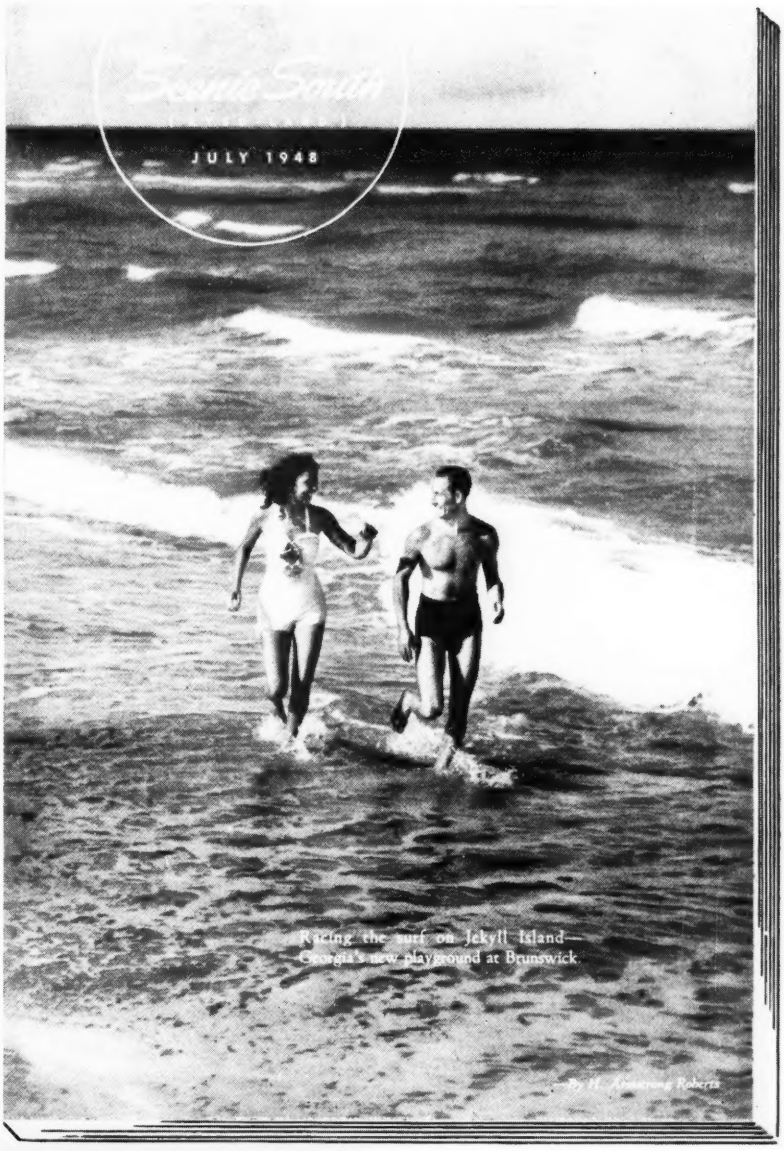


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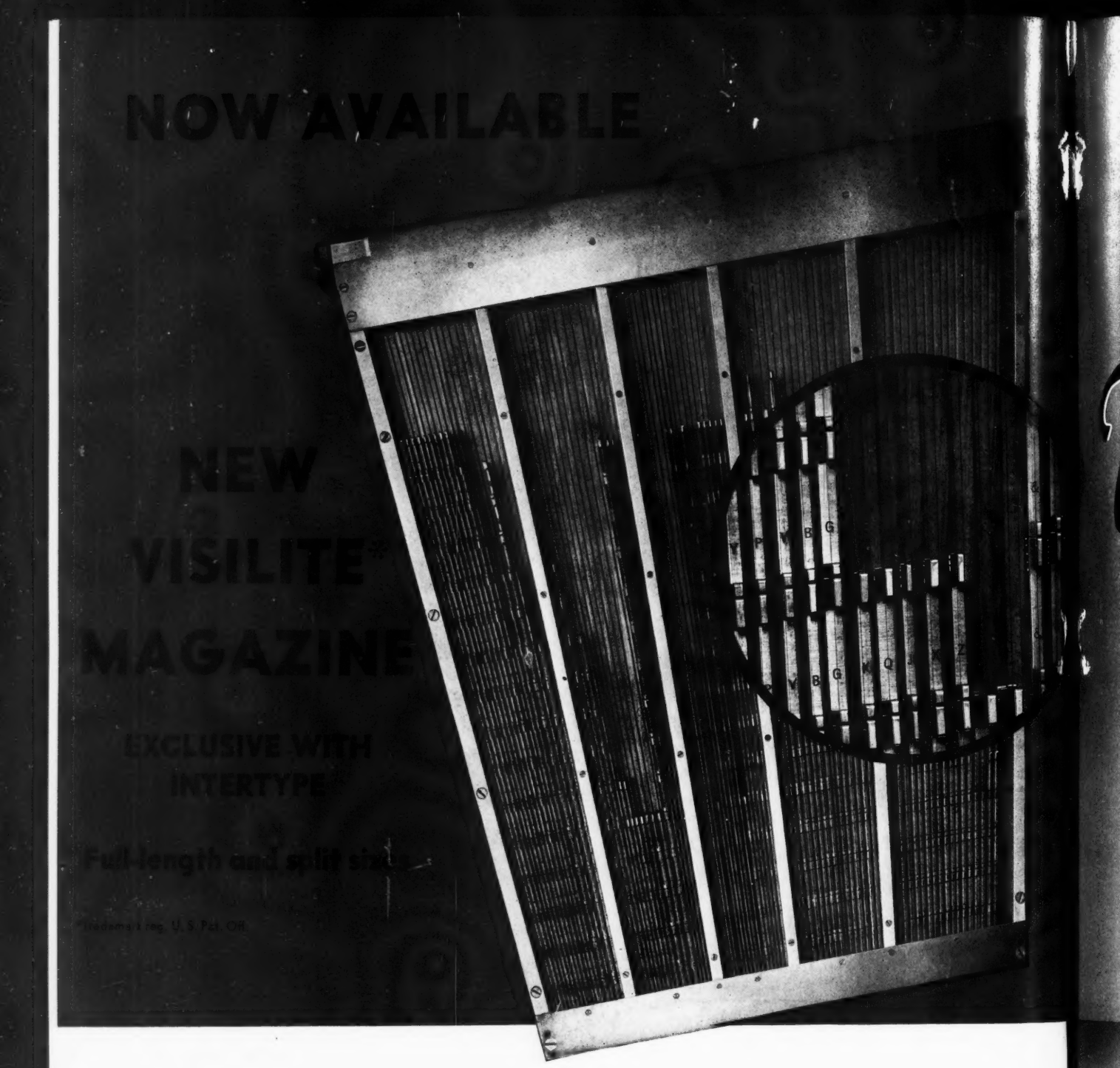


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